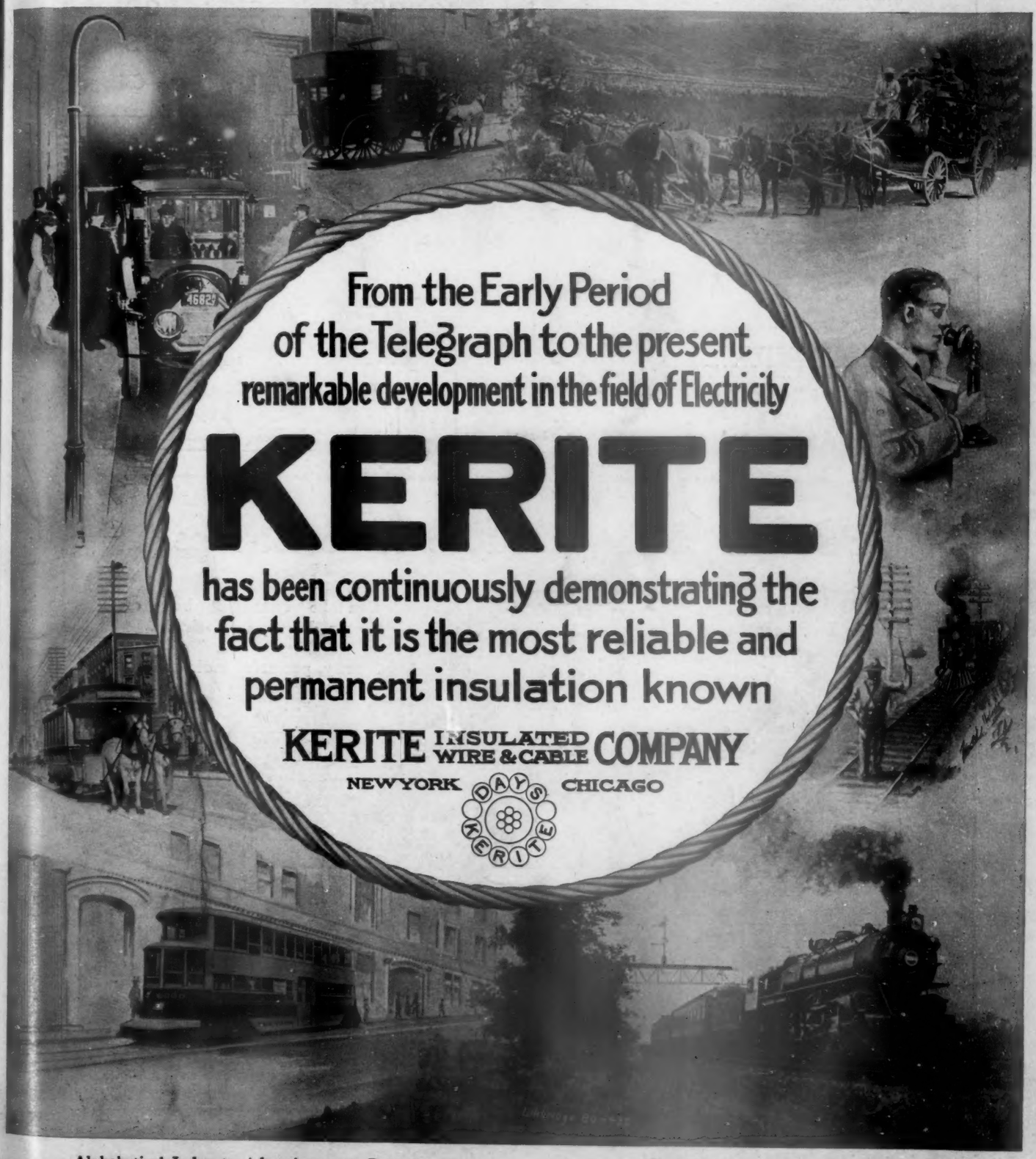
GENERAL LIBRARY
MAY 3 1919
UNIV. OF MICH.

Railway Age

FIRST HALF OF 1919—No. 18 NEW YORK—MAY 2, 1919—CHICAGO SIXTY-FOURTH YEAR

Published weekly by Simmons-Boardman Pub. Co., Woolworth Bldg., New York, N. Y. Subscription Price, U. S. and Mexico, $5.00 a year; Canada, $6.00; foreign countries (excepting daily editions), $8.00. Entered as second-class matter, January 30, 1918, at the post office at New York, N. Y., under the act of March 3, 1879.


From the Early Period
of the Telegraph to the present
remarkable development in the field of Electricity
KERITE
has been continuously demonstrating the
fact that it is the most reliable and
permanent insulation known
KERITE INSULATED WIRE & CABLE COMPANY
NEW YORK
DAYS KERITE
CHICAGO

Alphabetical Index to Advertisements, Page 5.

Classified Directory of Advertisers, Page 6.

CHASE

Leatherwove

The long wearing, rich-appearing upholstery material—inexpensive and distinctive.

L. C. CHASE & CO., Boston
NEW YORK DETROIT CHICAGO
SAN FRANCISCO

The standard upholstery for over a third of a century—grades for all uses.

CHASE
Goat Brand
Car Plush

Chicago-Cleveland Car Roofing Company
Manufacturers of
Steel Roofs and Carlines for Freight Cars
631 Railway Exchange Bldg., Michigan & Jackson Blvds., Chicago

Nichols Transfer Tables
Turntable Tractors
Geo. P. Nichols & Bro. 2139 Fulton Street Chicago

Thor
ONE PIECE LONG STROKE HAMMER
CAN'T COME LOOSE

YOU WILL DRIVE MORE RIVETS PER HOUR
IMMEDIATE DELIVERY
Independent Pneumatic Tool Co.
Chicago New York Pittsburgh Cleveland Detroit San Francisco Montreal Birmingham 2

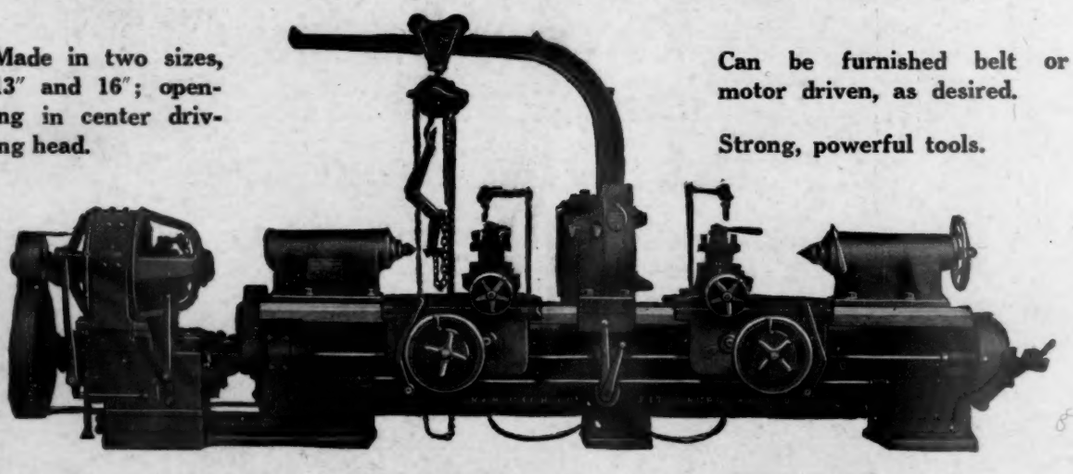
LINDE
OXYGEN
JUDGE ITS PURITY BY THE FACT THAT EXACTING USERS HAVE MADE US THE WORLD'S LARGEST PRODUCERS
JUDGE OUR SERVICE BY THE FACT THAT WE FILL ORDERS THE DAY RECEIVED FROM DISTRIBUTING STATIONS IN 40 CITIES
LINDE-IZED AIR-PRODUCTS
THE LINDE AIR PRODUCTS CO.
NEW YORK CITY

Putnam Heavy Double Axle Lathes

Made in two sizes, 13″ and 16″; opening in center driving head.

Can be furnished belt or motor driven, as desired.

Strong, powerful tools.



MANNING, MAXWELL & MOORE, Inc.
119 WEST 40TH STREET, NEW YORK
Machine Shop and Foundry Equipment of Every Description

BRANCH OFFICES

Boston Chicago Cleveland Mexico Cit, Mexico New Haven Pittsburgh
Buffalo Cincinnati Detroit Milwaukee Philadelphia St. Louis
San Francisco Yokohama, Japan

3

EDITORIAL
Railway Age

Playing the Game

H. C. Woodbridge, supervisor of fuel conservation in the Allegheny region, directed attention at the New York Railroad Club meeting week before last to the importance of the statistics which are being developed by the Fuel Conservation Section of the United States Railroad Administration. While there are, of course, many reasons why the performance of one railroad cannot be directly compared with that of another road, yet in a general way such comparisons may prove of the greatest value in inspiring the managements of the different roads to look into the reasons for the differences and to try to improve their records. The matter of fuel conservation is of such vital importance that no stone should be left unturned in encouraging those who actually handle it to use it to the best possible advantage. This, however, involves the most careful and far reaching educational methods, which in conjunction with accurate performance records will encourage the men to emulate each other and will transform the work of the firemen and engineers into the spirit of playing a game. It is this spirit that is so necessary in getting the best results from men engaged in any kind of occupation or business. It kills the spirit of drudgery and adds a zest to a man's work that is reflected in an improvement in his physical and mental condition and development. The records that are being developed by the Fuel Conservation Section, which will undoubtedly improve in accuracy as the standard statistics developed under the direction of Professor W. J. Cunningham become better understood and appreciated, will encourage rivalry among the managements of the different roads. These same statistics which are being compiled for divisions and for individual performance will accomplish the same purpose among the various parts of each organization and among the individuals.

Telephone Strike Under Government Operation

The rapidity with which the various stock arguments formerly advanced in favor of government management of railways and other public utilities are being refuted by the results of actual government operation is as amusing as it is instructive. One of the principal of these arguments was that the government would be a model employer, and that therefore under its management labor would be fairly dealt with and there would be no strikes. The Bell telephone system is now being operated, under government control, by the post office department. Recently the lines of the Bell system throughout New England were almost completely tied up by a strike of the operators and some other employees. The strikers attributed their break with the management to an unreasonable attitude assumed by Postmaster General Burleson regarding the method of settling their wage demands. Irrespective of the merits of the controversy, however, the fact that the strike took place under government operation is highly significant. We cannot now recall a single important claim which ever has been advanced in favor of government management which has not been refuted by actual experience in the operation by the government of the railroads and the telegraph and telephone systems; and some of the worst evils which appear sure to develop under long continued government management have not yet had time to come to full fruitage. For example, the twin evils of politics and bureaucracy, although they already have made themselves felt, are still in their infancy, and the properties in the main are still operated, not by political appointees, or by the mediocre products of the civil service system, but by men trained under private management. In view of the great disparity which exists between the claims made in the past by advocates of government operation and the results that have already been produced, one wonders how wide the disparity would become after politics and bureaucracy had done their perfect work, and men of ability had been weeded out.

Summing Up the Railroad Problem

There were three short talks before the National Institute of Social Science in New York last Friday which, although they occupied less than an hour and a half in all, summed up the present railroad situation as clearly as it could be covered in weeks of discussion. Theodore E. Burton, formerly United States senator from Ohio, sketched in outline the three phases through which, in his opinion, the railroads of the United States have passed; these were, encouragement of railroad building by gifts of land, etc., protection of the shipper which eventually amounted to persecution of the railroads, and exploitation of the employees. With this as a background, William Church Osborn showed in a lucid and entirely convincing address how, although the government had taken over control and operation of the physical properties of the railroads, it had not attempted to control the employees on these physical properties. As Mr. Osborn put it, control of the railroads without control of the organization to run them, means that the government has taken over less than 50 per cent of what constitutes the steam railroad transportation system of the country. It is a situation which nearly every railroad man realizes but it is one which is seldom fearlessly and frankly faced in the discussion of railroad matters in Congress or before congressional investigating committees. The solution that Mr. Osborn suggested, by implication at least, appeared to be a recognition that railroad labor as well as railroad capital was invested with a public interest to a degree which required it to be regulated. Employment in railroad work would then be an acceptance of conditions different from those in private industry and the right to strike—to quit work without warning—would be abrogated by acceptance of the position. George A. Post, chairman of the Railroad Committee of the Chamber of Commerce of the United States got down to the "brass tacks" of the situation when he summed up the discussion with the irrefutable fact that, discuss as much as you would the theoretical problems involved in the future of American railroads, what we have to do now is to "dig down into our jeans" as shippers and consumers of goods that are shipped by rail and pay the higher freight rate that is absolutely necessary to the continued solvency of the railroads.

What Punitive Overtime in Train Service Would Mean

THE QUESTION of "punitive" overtime for employees in railway train service has been referred to the consideration of Board of Adjustment No. 1 of the Railroad Administration without attracting much attention. If the public knew just what this action means it would attract more attention. The granting of punitive overtime would involve another increase in wages of many millions of dollars a year which the public would have to pay and would not necessarily mean at the same time any change in the hours of work of the men affected.

Almost all railway employees have now been given the eight-hour basic day and changes are under way as a result of which practically all of them except those in train service soon will actually be working only eight hours a day. Work in train service, however, is peculiar, and the wages paid for it are on a peculiar basis. The number of hours a railway engineer, fireman, conductor or brakeman works in a day depends upon how far and how fast his train runs. If he is called for duty and works eight hours or less (five hours or less for passenger enginemen), or runs 100 miles or less (150 miles for passenger trainmen), he receives a day's pay. If he works eight hours or more, or runs 100 miles or more, he receives overtime at the regular hourly or mileage rate for the time in excess of eight hours or the miles in excess of 100 miles. To many people this arrangement does not seem reasonable. Admitting the soundness of the proposition that eight hours should constitute a day's work, the question naturally arises as to why a man who runs 150 miles in eight hours should be paid a half day's overtime for the extra 50 miles. The result of considering 100 miles a day's work is that thousands of men who run more than 100 miles in eight hours or less receive more than a day's pay for working eight hours or less.

Suppose, now, that the demand of the train employees for so-called "overtime" on a time and a half basis is granted. This would mean, first, that an employee in train service who worked ten hours in a day would receive time and a half for the extra two hours. That sounds reasonable enough. But as 100 miles is also considered a day's work, that is not all that is involved. If an employee should run 125 miles in eight hours he would be paid time and a half for the extra 25 miles. Why should a man be paid so-called "overtime," not merely at the regular rate, but at the rate of time and a half, when as a matter of fact his entire day's work is accomplished in eight hours, or even less than eight hours? The answer of the employee is that in train service 100 miles is a day's work. That is true. But ought it to be a day's work when it can be and actually is, run in less and even much less than eight hours? And if the theory that it is a day's work is still to be recognized, on what grounds can the proposition be defended that when more than 100 miles is run in eight hours or less the excess mileage should be paid for, not merely on a pro rata basis, but on the basis of 50 per cent more per mile than is paid for the first 100 miles.

Stated in terms of money, it was estimated on the occasion of the controversy which resulted in the passage of the Adamson law that the granting of time and a half for overtime would cost the railways about $40,000,000 a year. The wages of the train service employees are now at least 50 per cent higher than they were then. Therefore, to grant their demands now would cost the railways about $60,000,000 a year. This is upon the assumption that the terminals between which trains are run remain as they are now. Every study of the subject which has ever been made has indicated that it would cost more to change the terminals and shorten the runs than to leave them as they are.

It is clear that the train service employees should be required to make some very large and important concessions before the large additional burden which would result from granting them time and a half for overtime should be imposed upon the public.

New Light on Present Railway Wages

THE EFFECTS OF THE CHANGES in salaries and wages and working conditions on the railways which have been made under government control are strikingly reflected by the statistics regarding the payroll for January, 1919, which were published in the *Railway Age* for April 25, page 1060. The last month of private control was December, 1917. In that month the railways handled practically the same traffic as in January, 1919. In January, 1919, however, they had 145,026 more employees than in December, 1917. This increase in employees was largely due to reduction in the average hours worked per employee per day. While the increase in the number of employees was 8½ per cent, the increase in the number of days worked by those reported on a daily basis was less than 6 per cent, and the increase in the hours worked by those reported on an hourly basis was less than 4 per cent.

It is clear, however, that the amount of traffic handled per employee, and in proportion to the average number of hours or days worked per employee, was smaller than in December, 1917, in spite of the vast advances in wages which have been made, and of the fact that December, 1917, was a month of extremely severe weather, while January, 1919, was a month of extremely mild weather. With the average wage per employee going up and the average amount of traffic handled per employee going down, it is easy to understand why the changes in wages and working conditions are having such unfavorable effects upon net earnings.

The table showing the increases and decreases made in salaries and wages per day or hour calls attention forcefully to the difference between the way in which the officers of the railways and the employees have been treated under government operation. The average salary of general officers receiving $3,000 or more per year has been reduced 20 per cent. The average salary of division officers receiving $3,000 or more per year has remained unchanged. The average salary of general officers receiving less than $3,000 has been increased 17 per cent, and the average salary of division officers receiving less than $3,000 has been increased 39 per cent. The average increase made to all officers and employees up to the end of January had been 48 per cent. Since then further advances have been made to employees in train service, etc., which will increase the average to considerably more than 50 per cent. In other words, the general and division officers receiving more than $3,000 a year have seen their salaries standing still or being reduced, while they have seen the wages of railway labor advanced by more than half. If railway officers have not been altogether happy and enthusiastic about a regime which has had these relative effects upon their compensation and that of other persons in railroad service, it need occasion no surprise.

There is a marked difference between the changes which have taken place in the number of men employed in train service and the number employed in the shops. Owing to the reductions in passenger service, and to reductions in the number of freight trains due to increases in the average freight train load and to reductions in the freight traffic handled, there have been reductions in the number of almost all the classes of men employed in the train service. On the other hand, the statistics for January show a sharp increase in the number of men employed in the shops. In December,

1917, the number of machinists, blacksmiths, boilermakers, air brake men, painters and upholsterers, car inspectors, car repairers, machinists' helpers and apprentices, and gang and other maintenance of equipment foremen, was 278,188; while in January, 1919, it was 338,629, an increase of 60,500, or almost 22 per cent. Reductions in average hours worked per employee will account for some of this increase in the number of employees, but the total hours these employees were paid for on an hourly basis was much greater in January, 1919, than in December, 1917. The advances made in their hourly wages ranged from 41 to 85 per cent; and this, coupled with the large increase in the number of hours they were paid for, accounts for a large part of the increase in railway expenses. The Railroad Administration has adopted some radical measures in the shops, including the abolition of piece work. Most of these have been adopted contrary to the opinions of most leading railway men as to what ought to be done. How much have the new policies which have been favored by labor union leaders and adopted by the Railroad Administration, had to do with the manifest decrease in the efficiency of shop labor? The shop crafts are now before the Board of Railroad Wages and Working Conditions asking for another large advance in wages. They might pertinently be asked to work efficiently for the high wages they already are receiving before seeking for another advance.

Computations based upon the January pay roll indicate that in that month the wages being paid by the railways were running at a rate substantially in excess of $900,000,000 a year more than they were when government control was adopted. Since then other advances amounting to about $65,000,000 a year have been made. Roughly speaking, therefore, it must be concluded that, assuming that the same number of employees would be kept on the pay rolls as in January, 1919, and that they would continue to work the same number of hours or days per month as then, the advances in wages made under government control would amount to very close to $1,000,000,000 a year. This fact is highly interesting and significant in view of what was said by the Railroad Wage Commission about a year ago in its report. That commission was created to consider the claims of all classes of employees. In its report it said that if all the advances in wages asked for were made they would cost about $1,000,000,000 a year. It recommended advances amounting to about $300,000,000 a year. Since then, however, sufficient advances have been made actually to raise the total granted to a sum equal to all that the railway employees originally asked for. The mere fact that in sum total the railway employees have been given all that they asked for would be enough to raise a question in the minds of thinking and fair-minded people as to whether in many cases the advances which have been made have not been very excessive.

The representatives of the railway employees have certainly done very well for their followers. As to those who have represented the public, and especially Mr. McAdoo, to whom the present wage scales are chiefly attributable, it may at least be said for them that they have succeeded in restraining themselves from giving the employees more than the employees asked for!

Counting the increases ordered by the director general during the past year as $900,000,000, the total increase in three years has been $1,250,000,000, as the railroad companies allowed increases amounting to $350,000,000 in 1916 and 1917. This makes a total increase since 1916 of about $600 per employee per year, or about 60 per cent; and since 1914, when the war began, the average increase has been about 80 per cent. For the trainmen the total increase in three years has been estimated at $295,000,000 a year, including $70,000,000 as a result of the Adamson law, $160,000,000 from General Order No. 27 and $65,000,000 from the recent supplemental orders. This would make the average increase per man $725 a year. The rise in railroad wages in recent years is shown in the following figures of average annual earnings per employee those for 1918 and 1919 being estimated:

	All employees	Train men	Employees not in train service
1910	$673	$993	$599
1914	810	1,253	711
1917	1,004	1,470	900
1918	1,330	1,870	1,200
1919	1,500	2,020	1,325

For want of a better unit, these calculations are necessarily expressed in terms of the somewhat enfeebled, but still, in a manner of speaking, almighty dollar, which will buy just as much fine gold as it formerly did and somewhat more of railroad securities, but less of almost everything else. The monetary unit in which wages are paid, however, is the same as that used to pay freight and passenger rates, which have not yet been advanced proportionately with wages.

Shall Engineering Be a Profession or a Trade?

THE APPEARANCE of representatives of Engineering Council and of the American Association of Engineers before the Board of Railway Wages and Working Conditions at Washington on March 31 and April 1 and 2, to appeal for higher wages for technical engineers in railway service, marks a new departure in the activities of engineering associations and one of much significance. Engineering work (civil, mechanical or electrical) requires a high degree of technical knowledge, in addition to practical experience; it requires the use of the brain rather than of the hand; it involves, in the main, the giving of directions, rather than the carrying of them out; in other words, it has the characteristics which differentiate a profession from a trade.

Because of their common professional interest, engineers have organized themselves into various technical societies. The national and local engineering societies have amply justified their organization by their valuable contributions to the knowledge of the profession of their members. In their concentration on technical activities they have given little attention to the promotion of their interests financially through these organizations, leaving this to the individual initiative and efforts of their members.

Meantime, workmen in the trades in railway service and elsewhere have combined for financial rather than technical or educational benefits, and through the power of their organizations have forced large concessions in wages and working conditions from their employers. This has reacted to the financial detriment of the engineers, particularly in railway service. It has led to a feeling among many members of the technical societies that these societies must give more attention to the promotion of the business interests of their members. It has also resulted in agitation for the formation of organizations of engineers fashioned after those of the trades whose principal object would be to promote the financial rather than the technical interests of their members.

The hearing at Washington brought into the foreground these two schools of engineering thought. Engineering Council is a joint organization of the four national engineering societies (civil, mechanical, electrical and mining) with the American Society for Testing Materials, formed to represent the engineering profession in matters of common interest. In general, the membership of its constituent societies includes the older and more experienced men of the profession. By its appearance at Washington it reflected the belief of the older and well established societies that the interests of the engineering profession, as represented in railway employ, made advisable the presentation of a united plea

for increased compensation for engineers. Its spokesmen pointed out the failure to recognize engineers adequately in the past and urged attention to the merits of their request.

The American Association of Engineers approached the problem from the other angle. It is intended solely as a business organization for engineers, and its membership is principally among the younger men in the field. It is patterned in many ways after the trades unions. It advocated collective bargaining, the standardization of positions, working conditions, and salaries, etc., and presented a standard wage scale for railway engineers to the Board.

There is no disagreement between these two schools of thought on the point that technical engineers in railway service are underpaid. This is evidenced by the appearance of representatives of both organizations to plead their cause. Where they differ is as to the methods which should be pursued to correct this situation. Shall they be those of a professional or a trades union organization?

Those advocating the latter course point to the lack of progress which the older national engineering societies have made in promoting the financial interests of their members, and argue from this that because these associations have not given attention to the business interests of their members in the past, they must necessarily continue this policy. But is this true? The policy of any organization is in the control of its members and it can be made to express their desires. The time may have come for these organizations to take up these new activities. That they recognize this fact is indicated by the participation of Engineering Council in the hearings at Washington. True, the beginning is small, but it is a beginning. There is nothing inconsistent or unprofessional in these technical societies taking such action along certain lines. The legal and medical associations have not considered it unprofessional to do so, and surely the engineering societies can do as much.

Those advocating the professional point of view believe that it will be unfortunate if engineers in railway service and elsewhere permit the present inequality between the compensation of professional engineers and workingmen to lead them to take any steps which will change the standards of the former to those of a trade union. They maintain that no group of men can adopt the principles of standardization of positions and wages and collective bargaining without at the same time suffering other results—most important of all, the stifling of individual ability and initiative, which is the foundation of professional ambition and advancement. When the position becomes the measure of compensation to the exclusion of the kind of work done by the individual occupying the position, the work degenerates from that of a profession to a trade. Where the position of a man, whether he be rodman or chief engineer, carries a fixed salary without reference to his ability and efficiency, the incentive to the highest achievement is lost. This has been the case in the trades. The members of Engineering Council believe that engineers are underpaid today, but they also believe this can be and is being overcome by other than trade union tactics. Other professions have been able to do it, and the engineers can.

Perhaps it may become necessary ultimately for brain workers of all classes to organize themselves into unions and use trade union methods to get a compensation reasonable compared with that of hand workers. But iron-clad standardization of wages and working conditions in the trades tends to destroy individual skill and energy and to hinder industrial efficiency; and standardization of wages and working conditions in the professions could not fail to have a similar tendency.

Present conditions call for sober thinking on the part of all engineers in railway service or elsewhere. Shall engineering in the future be a profession or a trade? The attitude of railway men will largely decide.

Administration Draft Gear Tests

THE PUBLIC DEMONSTRATIONS of the method of recording the action of draft gears under impact, which were carried out at the draft gear testing plant of the T. H. Symington Company at Rochester, N. Y., on April 10 and 11, opened up some very interesting possibilities in the graphic comparison of various types of gears. But aside from the graphic recording method shown, a description of which appears elsewhere in this issue, the outstanding features of the demonstrations are the evidence which they furnished as to the thoroughness with which the Inspection and Test Section of the Railroad Administration is studying the draft gear problem and the perfect fairness and good faith of the Section in the conduct of its investigations. Constructive criticism was invited with the utmost frankness and all suggestions offered were gladly received.

The testing of draft gears under conditions closely approaching those encountered in service is not entirely new. The method of graphically recording the action of the gears during the complete cycle of draft gear movement from the instant of first contact of the buffing faces to the instant of final separation, however, is unique. In some respects the apparatus is crude, but there appears to be no reason why the errors in the record may not be kept within limits which for practical comparisons are insignificant.

The study of the characteristics of new draft gears, however, is but one phase of the whole draft gear problem. The ultimate and decisive test is not in the possession of the characteristics of the ideal draft gear, but in the maintenance of characteristics nearest approaching the ideal throughout a reasonable period of service. To obtain reliable data on this phase of the subject requires a large amount of investigation and the essential element in such investigations is time. This phase of the subject is now being investigated by the draft gear committee of the Master Car Builders' Association, which is also co-operating with the Inspection and Test Section of the Railroad Administration. The prospects that ultimate results of the highest constructive value may be obtained through the joint efforts of these two agencies are bright.

New Books

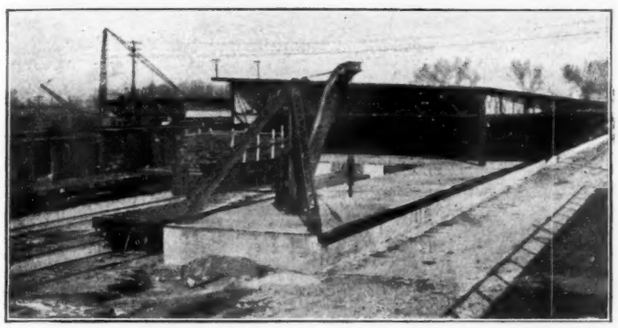
Training for the Electric Railway Business. By C. B. Fairchild, Jr., executive assistant, Philadelphia Rapid Transit Company. Written under the supervision of T. E. Mitten, chairman, executive committee, Philadelphia Rapid Transit Company. 155 pages, 9 illustrations, 5 in. x 7½ in. Published by the J. B. Lippincott Company, Philadelphia, Pa. Price $1.50.

The function of this book is to present the demands and requirements of the electric railway business to the young man who is about to choose an industry. It outlines the organization of the business, names the officers required and explains the duties of each officer. The book is divided into five parts, as follows: Organization, the executive and transportation functions, the engineering functions, the administrative functions and miscellaneous functions. Each of these five phases of the business is laid out briefly and in order so that a single reading of the book will furnish a very complete and well defined picture of the subject. For example, in the section dealing with the executive and transportation functions, appear such subjects as the executive, the manager's duty, the morning mail, the day's work, transportation, public service and timetables, and the motormen and conductors. The book is written primarily for the young man looking forward, but as it outlines the entire field briefly, it furnishes the railway officer an opportunity to get a comprehensive view of his own work.

Novel Features in New D. & R. G. Freight Terminal

The Facilities at Salt Lake City Include Two Houses, Transfer Platforms and a Team Yard

BASCULE BRIDGES between trucking platforms and foot warmers for checkers are special features of new freight house facilities now being completed by the Denver & Rio Grande at Salt Lake City. Aside from these, the terminal represents an effective design based upon a simple layout and modern construction ideas. The development consists of separate houses for handling in and outbound business, together with appurtenant platforms, tracks



Inbound House and 20-Ton Derrick; Outbound House in the Background

and a small team yard. The freight houses and platforms are located at the southwest corner of the intersection of Second South and Fifth West streets, and replaces an old installation which had become entirely inadequate to take care of rapidly growing needs.

In general, the new layout consists of parallel inbound and outbound houses with two 16-ft. transfer platforms between, all connected at the north end by a trucking platform 18 ft. wide. Another thoroughfare between houses and platforms is afforded by three pairs of hand-operated bascule bridges 14 ft. in width, located near the mid-length of the layout. They are protected by a continuous roof between houses built at a height to clear the bridges when in the upright position.

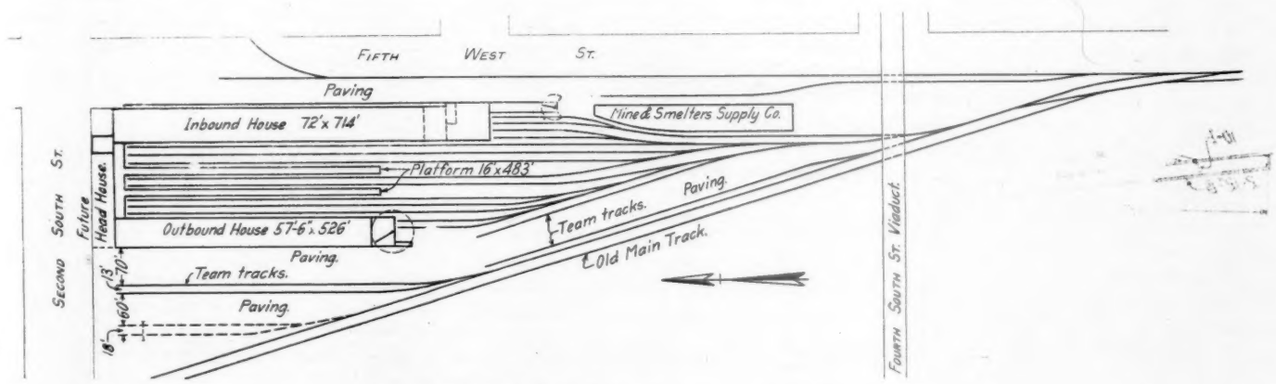
There are three tracks serving each house, with two additional tracks between the island platforms. These eight tracks have a capacity of 100 cars, set for loading. In addition, two spur tracks at the south end of the outbound house and four at the south end of the inbound house are used for end door loads. Four team tracks with a combined capacity of 45 cars are provided, and two additional tracks are contemplated. The tracks to be built are to be bridged by a 30-ton capacity transfer derrick located near Second South street.

It was originally planned to construct a head house facing Second South street and adjoining the north ends of both freight houses, but war-time economies compelled the temporary abandonment of this part of the program, and offices, lavatories, etc., were fitted up for the agent and clerical force in the north end of the inbound house. All driveways are to be paved with 3½ in. of asphalt topping laid

Outbound House from the Team Side

on a 7-in. concrete base. The pavement on Fifth West street has been completed.

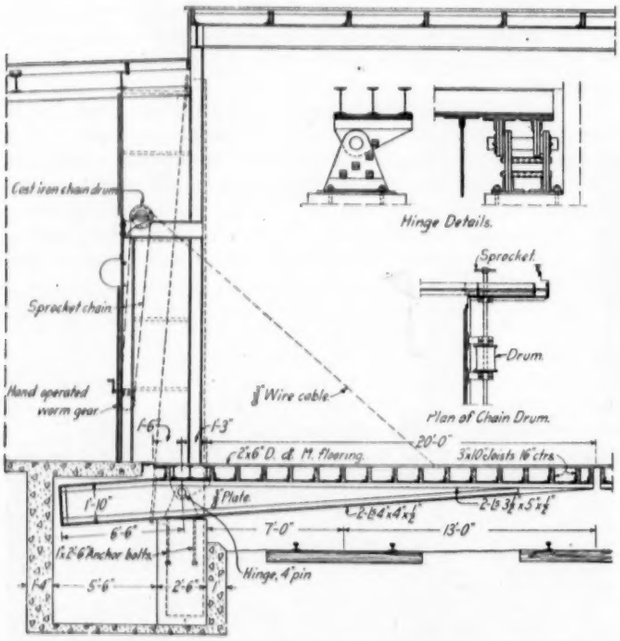
The outbound house is 57 ft. 6 in. wide by 526 ft. long. Of this length 399 ft. is inclosed, 84 ft. is covered platform, and 43 ft. is open platform. The latter is provided with a 5-ton electrically-operated, full-circle, swing steel derrick with 40-ft. boom. The inbound house is 714 ft. long, including 84 ft. of covered automobile platform at the south end. The inclosed portion is 66 ft. wide, exclusive of a 6-ft. loading platform on the team side. An open platform 19 ft. wide by 127 ft. long adjoins the covered platform and is provided with a 20-ton, stiff-leg derrick with a 23-ft.



Layout of the Freight Houses and Tracks

boom. A concrete ramp affords easy access to the automobile platform from Fifth West street.

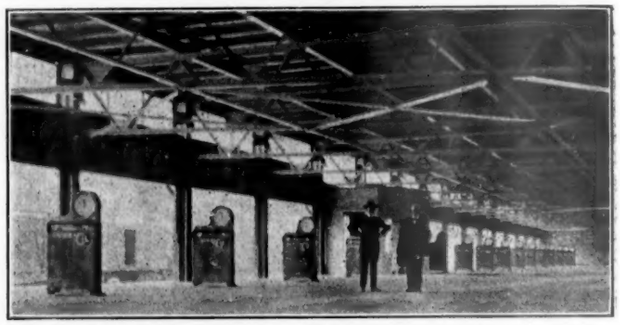
The houses are one story of concrete and steel construction, the details of which are common to both. The floors consist of 1½ in. of J-M asphalt mastic on a 5-in. concrete base which in turn is supported by a thoroughly-tamped sand and gravel fill between retaining walls. Cement topping, in place of the mastic, was used on the automobile and open platforms. Steel columns, spaced 21-ft. center to center on both track and team sides support the roof trusses, giving a clear span of 54 ft. 8 in. in the outbound and 64 ft. 8 in. in the inbound bouse. Above the doors there are reinforced concrete lintels on both track and team



Details of the Bascule Bridges Connecting Trucking Platforms

sheathing rests on 4-in. by 6-in. rafters spaced 4 ft., on centers, and spiked to lugs on the 10-in. 23½-lb. roof purlins. Steel canopies, 18 ft. wide, covered with corrugated iron, are suspended from brackets attached to the columns on the team side of both houses.

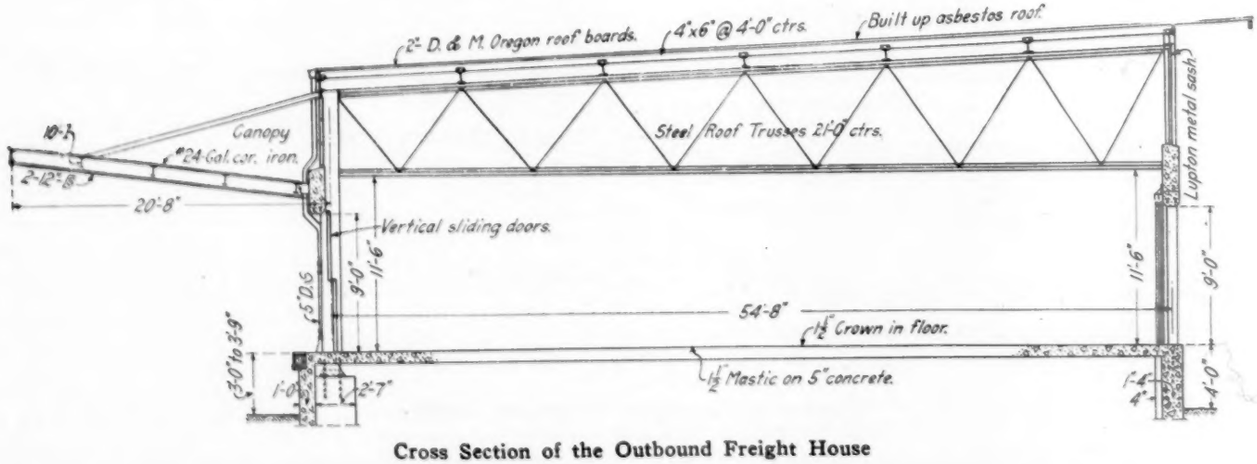
Two styles of doors are used. On the team side, Kinnear vertical sliding sectional steel doors, providing a clear opening of 9 ft. by 20 ft. were installed. On the track side horizontal sliding, tin-clad fire doors, each 9 ft. by 11 ft. were provided. The latter operate on double lines of continuous trolley tracks bracketed to the concrete lintels. The vertical sliding doors are counter-balanced by weights suspended inside the columns of the steel frame. Well diffused light is



Interior of the Outbound House

obtained through ribbed glass set in metal sash above the concrete lintels.

A noteworthy feature of the design is the provision for the comfort of the checkers in cold weather in the shape of a heating system for foot warmers. A line of 3-ft. 6-in. horseshoe-shaped concrete conduits extends under the floors of each house. Heat is supplied in these conduits by steam pipes, and as the automatic dial scales are located directly over the conduits with a vent and floor register at each one, the checkers are afforded a warm place to stand. These "foot warmers" meet a long felt want and contribute to the efficiency of the checkers, while eliminating the obstruction to a general view of the interior introduced by the usual checker's house. The steam pipes have a gravity return to



Cross Section of the Outbound Freight House

sides for the full length of both houses at a clear height of 9 ft. above the floor, which are supported by brackets riveted to the columns.

The roofs are of two-inch tongue and grooved lumber, covered with "J-M" three-ply builtup asbestos roofing. They have an overhang of five feet on the track side. The

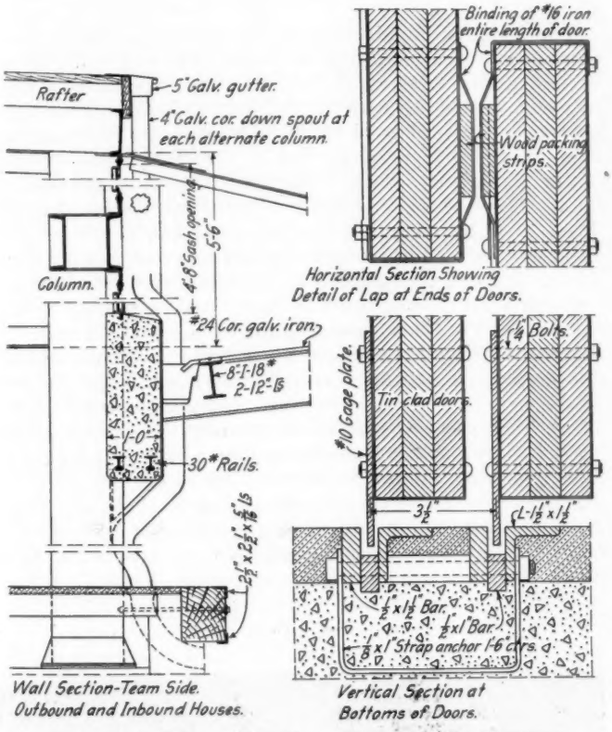
the boiler located in the basement under the north end of the inbound house.

Separate rooms for oils and hides, invoice, bonded, and perishable freight are provided in the inbound house. Ample weighing facilities are afforded by 30 Fairbanks automatic dial scales, of two to five-ton capacity, 17 of

which are placed in the outbound house and 13 in the inbound house, together with one 5-ton wagon scale on the covered platform of each house.

The platform heights are variable on the team sides, ranging from 3 ft. 3 in. to 4 ft. at the inbound house and 3 ft. to 3 ft. 9 in. at the outbound house. For guards 10-in. by 12-in. timbers with exposed corners protected by angle irons are set in the concrete wall, the top being flush with the floor. The transfer platforms are each 483 ft. long by 16 ft. wide, with a butterfly-type roof supported by timber posts set in channel-iron pedestals which are spaced 21 ft. center to center, and bedded in concrete. The floors and roofs of the platforms are of the same composition as those of the houses.

The character of the bascule bridges, mentioned above, is indicated in the drawing. They are operated by worm gears attached to auxiliary columns set back of the door line of the



Some Structural Details of the Freight Houses

houses, and near the edges of the platforms. Steel wire cables ⅜ in. in diameter are fastened to the outer ends of the bridges and wind up over the drums on a shaft connected to the hand gear by an endless chain.

Electric light is supplied by 100-watt lamps, one to each 21-ft. panel; two rows being used in the outbound house, three in the inbound house and a single row on each transfer platform. Detachable cords 35 ft. to 50 ft. in length with two and three 60-watt lamps on each provide light in the cars. Double service plugs for these cords are set in alternate posts of the platforms. When not in use, the cords are stored in cabinets fastened to the posts.

The Lynch Construction Company of Salt Lake City was awarded the general contracts for the foundations and superstructure, while the structural steel was fabricated and erected by the Omaha Structural Steel Works. In order to insure continuous operation, traffic being particularly heavy at the time construction was begun, it was necessary to build the plant in units; the outbound house being completed and put in operation before the old sheds could be wrecked and the site cleared for the erection of the inbound house. The contract was let and work started in August, 1917, on the outbound house and one transfer platform, which were completed and occupied the following May, after which the old sheds were torn down and work was begun on the inbound house. All plans and specifications were drawn in the office of J. G. Gwyn, chief engineer of the Denver & Rio Grande, Denver, Colo.

The Railroad Administration's New Advertising Campaign

Now that the war is over and the necessity for restricting travel has passed, the Railroad Administration is spending approximately a million dollars in advertising campaigns. This attempt on the part of the Railroad Administration to restore the travelers' interest is developing into three campaigns. In fact, three distinct campaigns are being carried out at the present time, one to restore tourist travel to pre-war standards and the other two to again start the westward migration of homebuilders.

The first definite steps taken in this general campaign were toward the establishment of a Homeseekers' bureau last January as part of the Agricultural Section of the Railroad Administration. This bureau was placed under the jurisdiction of J. F. Jarrell, with the two-fold purpose of more closely co-ordinating the agricultural development work of the railroads under federal control with allied departments of the government and prosecuting the work with increased vigor. Its establishment was in a way due to the agitation for furnishing information to returned soldiers and war workers concerning available land in all parts of the country on which they might begin life anew. The advertising done under this bureau is not extensive, but this does not necessarily impair the efficiency of the service rendered by the bureau. At the present time classified ads are being placed in a number of farm daily and weekly papers throughout the United States, the inquiries received as result of these ads being sent to the railroads interested. The supervisor of agriculture of the roads to which the inquiries are sent gathers all available data, and after the prospective settler is furnished with this information in the form of pamphlets and booklets, he is placed in touch with reliable land men, whose duty it is to see that he is sold productive land. The new farmer is introduced to his future neighbors by the county agents, and is also put in touch with the state agricultural college, which will help solve his seed, crop and stock problems. In general it is the duty of these county agents to see that the man "starts right," and that he is an asset to the community.

Closely allied with the work being done by the Homeseekers' Bureau is the campaign instituted at a meeting of the agricultural supervisors of the Railroad Administration at Memphis, Tenn., early in April. At this meeting, which was presided over by J. L. Edwards, manager of the Agricultural Section of the Railroad Administration, a program was adopted which included four general propositions, as follows:

"1. To collect the latest information about opportunities for farming, stockraising, dairying, fruitgrowing, etc., in the several states having undeveloped resources, and furnish it free to those who wish to engage in such pursuits, special attention to be given to discharged soldiers, sailors and war workers.

"2. To co-operate with county farm agents and other government and state authorities in looking after the interests of newcomers through the dissemination of information regarding methods of soil preparation, seeding, cultivation,

etc., in order that they may be successful in the localities in which they have settled.

"3. To improve marketing conditions by the widest circulation of information about where and when farm products will be ready for sale and where, and when there will be need of such products, thus enabling the farmer to send his stuff to markets which are not glutted, and to obtain for it a price that will mean a profit on his investment, rather than a loss.

"4. To conduct a campaign in co-operation with government and state authorities with the view of increasing the livestock output, not only because it is a profitable feature of the farming business, but also for the purpose of building up the soil."

It can clearly be seen from the propositions stated in this program that the work will, to a large extent, augment the work of the Homeseekers' Bureau. This bureau in the first three months of its existence awakened the interests of 12,000 prospective settlers, of whom 15 per cent were discharged soldiers, sailors and war workers. In many cases they may be led to the new fields, and it is the work of the agricultural supervisor under this plan to carry the service rendered these new farmers still further. The work being done by the agricultural section, aside from the campaigns carried on by the Homeseekers' Bureau, is partially illustrated in a statement made by C. L. Seagraves, supervisor of agriculture of the Atchison, Topeka & Santa Fe, and also chairman of the committee which is handling this matter for the north, west and east. The substance of the statement is contained in the following:

"One of the principal duties of the agricultural men at the present time is to see that the prospective settler has enough money to make the necessary payments on land, live stock, buildings, seed, etc. In this way it is almost impossible for him to fail if he takes advantage of the federal land banks and applies the information issued by the railroads and state agricultural colleges.

"Many of our states at the present time have unlimited undeveloped resources, and it is the duty of the agricultural departments to place these opportunities before industrial workers, discharged soldiers and sailors, and those desiring to change location.

"A great deal of attention at the present time is given to the improving of market conditions through the widest circulation of information in the way of market bulletins being issued by a number of railroads, containing information as to where and when products will be ready for sale, and where there will be a need for such products, thus enabling farmers now located along the line to send their products to markets which are not glutted, and receive a fair price for same, which means a profit on his labor and investment instead of a loss.

"Live stock, potatoes, and other products, are receiving a great deal of attention and the railroad agricultural departments are working hand in hand with the county agents and agricultural supervisors, so as to enable the farmer to grow more and better crops.

"Every railroad wants every farmer on its line to be an asset to the community in which he lives, and unless the farmer is able to conduct his business along profitable lines he will be a liability.

"The Agricultural Section of the Railroad Administration at the present time is issuing booklets on opportunities in the various States of the Union. These booklets are profusely illustrated and contain good concrete information as to temperature, rainfall, soil conditions, crops, stock, marketing, school advantages for the children, etc."

The third phase of the general advertising campaign carried on by the Railroad Administration concerns itself with a return practically to the pre-war practice of the railroads in advertising the national parks and monuments of the west. This is the real "See America First" publicity campaign, with which it is hoped to stimulate passenger travel enough to justify the expenditure of the thousands of dollars which the Railroad Administration is planning. The only difference between the pre-war advertisements and those being used by the Railroad Administration is that in the latter advertisements there is no specific mention of routes or of the advantages of one point of interest over another. The fundamental principle behind all of the advertising is to induce the American public to travel, and the route which the traveling public selects to reach the advertised regions is immaterial.

This campaign has already been instituted in newspapers and magazines, and it is being furthered by the preparation and distribution of illustrated pamphlets and booklets describing the attractions of various sections of the country and especially the beauties of the national parks such as Yosemite Valley, Yellowstone Park, Glacier Park and the Grand Canyon.

The Railroad Administration has authorized the publication of low round trip summer tourist fares to practically all western resorts to which it has been customary to sell tickets in the past. In the majority of cases the sale date of these tourist fares will be from May 30 to September 30, inclusive, with the possible exception that 15-day tickets will be sold in the meantime. These reductions may be illustrated by those authorized for the Southern Pacific and Western Pacific. These roads have been notified that there will be two general classes of fares. For tickets limited to three months from date of the sale, the carriers will make a reduction of 20 per cent from double the one-way fare; and for the 15-day tickets sold on Friday and Saturday the reduction will be one-third. These reductions in general have been offered the public on practically every line over which the summer tourist travel has gone in the past and the passenger traffic officials of these roads have been making preparations for a heavier tourist traffic than ever before. To all appearances these reductions are practically the same as those made when the roads were under private control, but the fares are really proportionately higher, owing to the fact that the one-way fares on which the rates are based are very much higher than in the past.

Photo from Central News Photo Service

Food and Clothing for the Aerial Freight Service to Belgium

The National Foreign Trade Convention at Chicago

Meeting Attended by 1,800; Outline of the Ideas Presented; Abstracts of Some of the Papers

THE SIXTH NATIONAL Foreign Trade Convention which met at the Congress Hotel, Chicago, April 24, 25 and 26, had as its theme "Foreign Trade Essential to American Industry," but the spirit evidenced by the 1,800 delegates showed that they needed no conversion to that idea; they were already converted and came prepared to consider the practical problems of carrying on and increasing the country's present great trade overseas. The convention took the form of four general sessions and eight group sessions as well as the banquet Friday evening. Alba B. Johnson, president of the Baldwin Locomotive Works, was elected president of the convention and presided at the general sessions. Some 50 papers were presented during the three-day meeting, not including the addresses at the banquet by Edward N. Hurley, chairman of the United States Shipping Board on The Future of Our Foreign Trade; by Frank O. Lowden, governor of Illinois on The Meaning of Foreign Trade to the Middle West, and by James A. Farrell, president of the United States Steel Corporation and president of the National Foreign Trade Council, who spoke on American Maritime Policy.

The scope of the convention is perhaps best shown by an outline of the topics taken up at the various sessions. The first general session on Thursday considered America's Need of Foreign Trade, papers being presented by Edward Prizer, president of the Vacuum Oil Company, on Export of Industrial Products; by Fred I. Kent, vice-president of the Bankers Trust Company, on America's Financial Equipment for Foreign Trade; by Tracy Lay of the Department of State, on Present Aspects of France, and by William Pigott, president of the Seattle Car & Foundry Company, on The Element of Cost in American Exports.

The second general session on Thursday considered a number of topics, papers being presented by Charles J. Brand, chief of the bureau of markets of the Department of Agriculture, on The Vital Concern of Agriculture in Foreign Trade; by John M. Parker, president of the Mississippi Valley Association, on The Mississippi Valley and Foreign Trade; by William S. Culbertson, of the United States Tariff Commission, on The Bargaining Tariff, and by J. W. Hook, president of the Allied Machinery Company, on The Stabilizing Effect on American Industry of a Definite Foreign Trade Policy.

Thursday evening was devoted to four group sessions, dealing respectively with Commercial Education for Foreign Trade; Foreign Trade Merchandising; Financing Foreign Trade, and Advertising for Foreign Trade.

The topic for the third general session on Friday morning was the American Merchant Marine. Homer L. Ferguson, president of the Newport News Shipbuilding and Drydock Company, presented an able paper on American Shipbuilding which discussed the status of shipbuilding during the war and treated to no small extent the fabricated ship as compared to the established methods of shipbuilding. Other papers presented were by W. S. Tower of the division of planning and statistics of the United States Shipping Board, on The World's Merchant Fleets Today; by Frederick J. Koster, president of the San Francisco Chamber of Commerce, on The Future of the American Marine on the Pacific; by Ernest E. Baldwin of the New York bar on the Relation of Law to the Development of Our Merchant Marine, and by James E. Smith, president of the Mississippi Valley Waterways Association on The Relation of Inland Waterways to Foreign Trade.

Four group sessions on Friday afternoon dealt respectively with Foreign Credits and Credit Information; Direct Selling and Representation; Export Combination—the Webb Law in Operation, and Ocean Service.

At the closing session on Saturday, a paper was presented by Captain H. R. Moody, of the Quartermaster Corps on Packing for Export.

The tone of the convention expressed about as much as any other one thing the desire of those present to get back to a pre-war basis of unrestricted trade in private hands and with private initiative, every reference to that feature being greeted with loud applause and often with cheers. As one of the speakers put it, "the less the government interferes directly with export trade the better, confining itself to those functions which are clearly governmental, leaving to the exporter the handling of the business." Several references were made to the government control of the railroads, telegraph and cable lines, shipping, etc., and in every case the spirit in favor of their return to private control and private initiative was plainly shown.

On the other hand, it was felt that the government was not doing all that it should to help the exporter or the investor in the way of standing up for American rights in other lands. It was agreed that the consular service was efficient, but several appeals were made for additions and improvements to that service both for the purpose of a more adequate representation of American standing in foreign cities, and for the gathering of more information of a useful and practical character.

Great emphasis was placed on the necessity for investment of American capital abroad, it being pointed out on the one hand that trade would be expected where American capital was invested, and on the other that the country, if it desired to continue its export trade, would have to accept payments in securities because it could not secure goods for a long time to balance its exports to Europe.

Several of the speakers, touching upon the same point, showed the necessity for the limitation of imports by some of the countries of Europe and explained that with the exchange situation so adversely against them, they absolutely had to hold down their imports to a minimum until things are once more nearer normal. An appeal was made that American exporters should not complain at such restrictions, for the European countries were meeting an exceedingly difficult problem and themselves knew best how to work it out and what commodities they could for the time being best get along without.

The agreement of the delegates to the sentiments mentioned was apparent, and the desire to play fair and square with the European importer was much in evidence.

It is impossible to abstract any of the papers at length, but with a view to showing in more detail some of the important points that were brought out, a few are briefly abstracted as follows:

The Webb Pomerene bill was referred to by a number of speakers, among them Mr. Hurley, and was considered of sufficient importance to have a group session devoted to it, at which John Walsh, formerly general counsel of the Fed-

eral Trade Commission and other speakers considered its provisions in great detail.

America's Financial Equipment for Foreign Trade

By Fred I. Kent
Vice-President, Bankers Trust Co.

The most extraordinary condition will face the United States in relation to its foreign trade upon the signing of the peace agreement. Before considering the financial equipment of the country which has been built up to meet our foreign trade problems it will first be necessary to analyze this condition.

The United States will stand as the one great country of the world with power to produce, manufacture and deliver to other nations all of the commodities vital to man's needs during times of peace, and covering as well those things required for his convenience and desired for his pleasure. On the other hand, the power to purchase our goods by those countries which are our natural customers has been seriously depleted. All of the belligerent nations of Europe have great financial problems facing them, which cannot be solved honorably and successfully unless their imports are confined largely to essentials until such time as their exports of commodities and service exceed in value their imports and other current foreign obligations.

The world trade situation which will face the United States upon the conclusion of peace is about as follows:

We will be called upon by our allies to supply them with the minimum amount of goods with which they can get along, whose maximum will undoubtedly be determined more by the amount of credit which this country can furnish to them through investments and otherwise than by the demands of such countries, for they can undoubtedly use effectively more of our raw material and manufactures than they can purchase without our help. Our allies will owe us interest, which they can only pay in foreign exchange that they can accumulate on balance, except as the United States reinvests such payments in the countries which make them.

The neutral countries of Europe should import from us more than they export to us.

Our trade with South America, while against this country, should not be so in such proportion as has been true in the past.

The same condition will probably prevail in our commerce with the Far East.

Under the federal reserve system and with the authority of our member banks to accept time bills drawn upon them, together with the foreign relationships which have been established by American banks and bankers doing a foreign exchange business, we have abundant capital and facilities to finance our foreign trade as it exists today. We will, however, require a very large development of our discount market for acceptances in order to make the banking facilities which we already have fully effective. . . .

Admitting for the moment that our financial institutions and facilities are sufficient to take care of our foreign trade, in so far as it covers the actual operations necessary to finance such trade, another element has been introduced as a result of the war, which remains to be taken care of if we are to maintain and increase our export trade. The United States is to receive $500,000,000 annually in interest from those countries to which it has made loans. Its own foreign interest payments have been reduced through the purchase of foreign held American securities to such an extent that it is reasonable to expect an annual net balance in favor of the United States, based upon normal foreign trade conditions, of $1,000,000,000. Unless this sum is absorbed in some manner through additional imports, increased services purchased abroad or foreign investment, our natural export trade cannot be maintained nor increased. The amount is so large that our financial institutions cannot and should not absorb the whole amount, or even such portion of the total as will probably be left after deducting possible increased imports. It is going to be necesary, therefore, if we would hold and increase our export trade, to import such high class foreign investments that the public will see fit to purchase them. To do this to the extent required, it may be necessary to organize companies in this country whose business it shall be to investigate and purchase foreign securities in all parts of the world, where they can be surrounded by proper safeguards, and to issue against such securities for sale to the public their debentures based upon them. A few such companies, with sufficient capital to act as proper margin, controlled by men carrying the confidence of the public both as to ability and integrity of purpose, could extend a great service to the United States. Such organizations would be in position to make such thorough investigation of foreign securities before their purchase that debentures issued against them should be the safest sort of investment, and one that the public at large should be most willing to absorb. It would undoubtedly require less education as to foreign investments on the part of the people to develop a market for such paper than would be true in the case of foreign securities purchased for direct distribution.

It is also going to be necessary, however, for our great foreign exchange banking institutions which have the facilities for investigating and purchasing foreign securities to build up a market in the United States which will absorb them.

Still another form of foreign investment will be most valuable and undoubtedly necessary if we would maintain our exports, and that is the purchase of interests in foreign industrial partnerships and corporations. Such investments carrying with them as they should a proper representation in the foreign companies, would help stimulate our exports, and under conditions of great security as to payment. They should also be of great benefit to the foreign countries in which they were made, as they would help to develop their resources.

When such undertakings are made by American export manufacturers in foreign organizations which absorb their own products, it will in a sense represent a direct investment of our exports, thus taking them entirely off the exchange market, with the exception of the income to be derived from them. This would help the continuation of our export trade while that of the other nations is being built up to the point where they can give us imports in exchange for our exports in such manner as to represent a great world exchange beneficial to all concerned.

Due to the high prices prevailing, neutral countries have largely stopped the importation of all classes of goods except those absolutely needed at the moment, and it can be expected that such a condition will continue until prices are readjusted or, which would seem more doubtful, stability of present prices is apparently assured for a period.

No financial equipment for trade or any other purpose can be successful unless based upon integrity. Such integrity, if existent, can only be maintained while the mass of the people is honest at heart or is controlled by those who are themselves honest. That it was safe to deal with Russian banking institutions before the establishment of Bolshevism is of no help to that nation now that its people have allowed such banks to be looted by those temporarily in power. If it was wrong for the former owners of property in Russia to hold it, there is even less excuse for those who have stolen it

to have the use of it. While the world is being flooded with theories which are intended to cover up this situation, the cold fact remains that Russia is being ruled by murder and loot, and entirely without principle, and that stolen money is being used throughout the world to purchase those whose souls are for sale to carry on their false propaganda.

We have before us the spectacle of a so-called agent of the Russian looters, who is supposed to have back of him some millions of the ill-gotten wealth of the Bolshevists for the purchase of American goods from our manufacturers and exporters. It is inconceivable that any American manufacturer of integrity can be induced to sell his products for stolen property. Those who would sell their goods under such circumstances are in the same position as the man who would willingly and knowingly sell to a thief in exchange for money that he knew the thief had just stolen from his neighbor, and who is nothing more or less than a fence for stolen property. There is no more excuse nor right in dealing with wholesale crooks than with retail thieves, and if our country is going to stand for the principles which it professes, we will accept no market for our goods where payment is to be made from stolen wealth.

The Government and Foreign Credits

By E. E. Pratt
Vice-President, Overseas Products Corporation

Mr. Pratt, in his paper presented before the group session on Foreign Credits, outlined a number of ways in which the various departments of the government could expand the assistance they are now giving the exporter. In conclusion, however, he asked for a stronger foreign trade policy on the part of the government and said:

The foreign policy of the United States has in recent years seen some extraordinary contrasts. In the case of Mexico, although American property and American lives were sacrificed in the mêlée of revolutions and counter revolutions, we have refused to interfere. We took the position that we could not possibly interfere in the internal affairs of that republic. The same point of view seems to characterize our attitude toward Russia, and will probably characterize our position in the near future toward Germany and Austria-Hungary. On the other hand we have interfered in the internal affairs of the Dominican Republic and the Republic of Haiti, where American lives and American property were endangered. We have not only interfered, but we have set up governments that are practically colonial administrations. We are superintending the finances of those countries. We are even policing them. Just exactly why we should interfere in the affairs of the Dominican Republic and Haiti, and just exactly why we should take over and supervise these governments, and why we should omit to do so in the case of other disturbed areas even on the American continent, is a question which our unannounced foreign policy does not comprehend.

Stop for a moment to examine the map of the world, and no one can fail to be impressed by the very large areas that are today in a disturbed and unstable condition. No one can fail to be impressed with the spread of such infectious disturbances. He is a brave exporter who today is willing to send his merchandise into Central Europe, unless he has first received payment. The same is true of all of Russia and Siberia. The same is true of Mexico. We hear constant rumors about revolutions and disturbances in other parts of the world, as for example in Italy and Argentina. This is the most important aspect of the credit situation which we must take into consideration at the present time. It is a situation in which our government can be of the greatest assistance in selecting and in determining our credit risks. We must look to the government of the United States for a consistent policy with reference to the protection of American interests abroad.

But even more important, we must look to the government of the United States for a consistent foreign policy with reference to the establishment of stable government and the preservation of the existing economic system throughout the world. It is a question of very great importance whether the government of the United States at the present moment stands for stable government, or whether our government is at the moment an essentially disturbing element which tends rather to prevent the resumption of normal conditions.

Shall American Business Enterprise Be Restricted?

By Edward N. Hurley
Chairman of the United States Shipping Board

Ships are the controlling factor in the development of foreign trade. Before the war only 9.7 per cent of our total exports was carried in American bottoms. It is our hope, if our program is completed, to have sufficient ships to move 50 per cent of our total commerce in American bottoms.

We want to put the best American initiative behind the operation of the fleet; we want to get rid of red tape and the possibility of stagnation when moving these ships to the ports where they will carry American trade.

We can't build up our foreign markets in a slip-shod manner. We must specialize in trying to meet the different needs of different markets, and we must purchase raw materials and manufactured products from foreign countries as well as sell to them. We must take some chances in developing trade routes which are at present unprofitable, and a little of the pioneer spirit of the old days will not be out of place even in these modern times.

There is a feeling on the part of many business men that their competitors, at home as well as abroad, are not playing the game fairly. This is largely imaginary. Usually when you meet your competitor face to face you find that he is a pretty likable and human fellow. The same is true of our foreign competitors.

We hear a great deal these days about what is going to happen to American business when Great Britain and the other nations, supposed to have certain advantages over us, get into full swing. We have heard such doleful predictions many times long before the war.

After three months studying the situation in Europe I have not observed any outstanding advantage which they have over us, either from a production point of view, or a labor point of view, or from the character of products manufactured. This is true not merely of manufacturing, but with reference even to shipbuilding. Here we find some cloistered critics asserting we will never be able to compete with British shipping. Over in England you will hear English critics telling their government that Great Britain will never be able to compete with us.

We should not complain about Great Britain, France and Italy placing temporary restrictions on a number of commodities which they import. They are the best judges concerning what particular products they can do without during the present trying economic periods which they are going through.

We have many ships returning in ballast from France, Italy and Great Britain, and materials produced in those countries and needed here should be purchased now when tonnage is available. If our business men would take such

steps now, it would also be helpful in balancing our trade.

We needn't worry much about flank movements from our foreign competitors. They will compete fairly. They understand now, better than ever before, the evil of unfair competition. Germany's commercial system reached the point where it became top-heavy. It was hard to distinguish between Germany's commercial enterprises and Germany's government, and it is my belief that combinations between governments and business are almost as dangerous as combinations between church and state.

If there were no obstacles to be overcome, half of the exhilaration of contest and competition would be gone. Neither foreign nor domestic trade will ever be handed to us on a silver platter. Gossip, rumors or criticisms as to whether we can do this, or whether we can do that, in competition with other nations, takes up a great deal of time, and serves no useful purpose. Let us try it out and see. As a nation, we have never been lacking in perseverance, energy, enterprise and skill. We have developed enormous purchasing power at home and compete keenly, yet fairly, with each other. There is no reason why we cannot do the same in the markets of the world.

Business should *not* get into the habit of relying upon the government to solve difficulties which can be overcome by ordinary business skill and honest methods.

American Maritime Policy

By James A. Farrell

President, U. S. Steel Corporation, Chairman, National Foreign Trade Council

The temporary appearance as a military necessity of the government of the United States as a shipbuilder and shipowner on a colossal scale does not render it any less a fact that the future of the American merchant marine must depend on the attractions which it offers to the employment of private capital and the application of private enterprise. The steamship business is one requiring special and exceptional aptitudes. The men engaged in it have to match their wits against the keenest in the world; have to be prompt in decision, resourceful, expedient and expert in the calculation of probabilities. These are qualities which are not usually forthcoming when a government assumes the functions of private enterprise. As a commercial proposition, government owned ships in foreign trade could only result in disorganization of existing trade routes in which government ships might engage, while bringing about a complete paralysis of individual effort to obtain for private American ships a larger share of American sea-borne commerce. Thus, in the event of government ownership and operation of merchant vessels becoming a settled policy, the problem of the future of American shipping would solve itself by the extinction of private endeavor.

The Foreign Trade Council has already placed on record its conviction that American shipyards after the war will be able to produce tonnage at rates and under conditions that will compare favorably with those obtaining in foreign countries. There will be no return, for some time at least in any country, of so called pre-war prices of materials and labor. Shipbuilding materials and equipment are on a lower level in the United States, since the signing of the armistice, than in any other producing country; ship plates and structural material having declined $12.00 per ton here with a corresponding reduction in collateral forms of iron and steel products.

Foreign ships in the past have worked their round of trade with profit because when they reached the regions of great production of bulky cargoes they found few or no rivals. This will no longer be the case, because the foreign ship which goes in ballast from a coal station or South American port to the east coast of North America, must reckon with the competition of the tonnage of the United States. On the other hand, there is no escaping the fact that we start in the race with higher costs of operation. . . .

If in other respects we are able to meet the competition of the world on equal terms, especially with types of ships built or to be built, comparable with those of our competitors, experienced in long voyage trades, the relatively high wages of American officers, engineers and seamen sufficient in numbers to operate economically with safety will not prove to be a serious handicap. Of course it is essential that laws requiring the employment of an excessive number of seamen or engineers, be repealed by the establishment of a definite policy.

One of the earliest requirements of the shipping situation is likely to be a general international agreement about the employment of the agencies of ocean transportation in the least wasteful and the most effective way.

The freedom of the seas, as a working formula of peaceful intercourse, should find a larger conception. It should stand for open ports and as free an interchange of commodities as the fiscal necessities of the nations will allow. To ourselves, with a merchant marine commensurate with the resources of our country, the lesson will come with new force, that to sell we must also buy.

American Manufacturers' Export Association

In connection with the Foreign Trade Convention the American Manufacturers' Export Association held a luncheon on Friday at which Alba B. Johnson, president of the Baldwin Locomotive Works, presented a new idea as to the possible relation of the banks to foreign trade.

"The banking problem, the financing of our foreign trade, is one of the most important matters that now confronts us," said Mr. Johnson. "Goods cannot be sold unless satisfactory arrangements are made for payments. I feel that our bankers are confined in their dealings by the limitations of our banking methods, and that it is not realized that methods are in use elsewhere that are much more elastic.

"With reference to the plan I have in mind, you know that when you go to an insurance man and explain how you are going to ship goods he gives you a rate and assumes the entire risk, for that is his business. When you go to a banker he will extend you credit, provided you take the risk and do all the guaranteeing. Granted that the buyer is an individual whose responsibility can be ascertained, and that the man to whom you are talking knows the credit of this individual, isn't it reasonable to expect him to do the guaranteeing?

"What would you think of an insurance man who would say, 'Yes, I will insure you, provided you will underwrite the risk yourself.'? When a bank is asked for the credit rating of an individual it gives its opinion. The seller takes the bank's word regarding this credit and assumes the risk. Is it folly for the seller to say to the banker, 'will you for a consideration guarantee this information?' Is it unreasonable for you to ask the bank to back up its opinion?"

The Kansas City, Clinton & Springfield and the St. Louis-San Francisco have been indicted by a Polk County (Mo.) grand jury under the state law requiring railroads to operate a passenger train each way each day. The railroad companies take the stand that the statute cannot apply as long as the roads are in the hands of the government.

The Industrial Board of the Department of Commerce*

Work of Board Is Reviewed Particularly in Relation to the Controversy with the Director General

By George N. Peek, Chairman

THE RECORD OF THE CREATION, purpose, organization and procedure of the Industrial Board is perfectly clear. The project was initiated in several preliminary conferences between W. M. Ritter and Secretaries Glass, Lane, Burleson and Wilson. At a special meeting with members of the Cabinet on February 3, the plan upon which the board finally operated was thoroughly discussed and explained and it was agreed by the director general of railroads that an essential element of success was the co-operation of the Railroad Administration, which was then and there promised by Mr. Hines. The legality of the course proposed was discussed and approved by Mr. Hines. The plan was submitted by cable to the President and by him approved. The board was, to use the language of Secretary Glass in cabling the President: "To endeavor in voluntary co-operation with business interests, to arrive at a level of prices upon which business activities would be more actively resumed and the Railroad Administration and other spending agencies in the government would be justified in buying liberally."

Departmental purchasing was an incident to and not a condition of the plan and yet a factor upon which the success of the plan must depend.

The procedure was to conduct an investigation of the costs of producing and marketing basic materials, textiles and important food products. It was to announce the results in the form of prices which it considered fair and reasonable and which would continue present wage rates and agreements and prevent reductions of wages. This was all the board ever intended or attempted to do.

Since the Armistice the plan of the Industrial Board was the first concrete, forceful and effective step taken by the government toward an immediate and general reduction in prices of commodities and the cost of living. That plan had passed so far into execution as to render its effect certain. Greatly reduced steel prices had been determined on a study of costs and the theory of the board was proved by the fact that their mere announcement made them effective, and that the books of steel producers show beyond question that the tide of buying had begun and that the very results promised by the board were rapidly materializing.

The disagreement between the board and the Railroad Administration was the incident that stopped the operation of the board, but the ostensible issues of that controversy are relatively so insignificant that they can never be advanced as the real consideration for the overturning of a policy so vital.

The director general contended that the price on steel rails was too high by $2 per ton. Throughout the discussion, the figures representing costs of production were constantly available to the Railroad Administration's representative, and the basis upon which conclusions have been reached has been repeatedly represented to the advisors of the director general and to Mr. Hines himself. Never have those figures been contested; never has additional or contradictory data been presented; never has the argument of the Railroad Administration been addressed to those figures nor to the conclusions drawn from them by the board. Repeatedly, all of these gentlemen have been urged to bring forward any facts which would assist the board in reaching a conclusion on prices lower than those approved. The answer of the Railroad Administration has ever been, that the price at which the Railroad Administration will buy is within its own discretion and that in its opinion the prices approved by the board are too high.

In the opinion of the board, the prices arrived at were the lowest which the members believed they could recommend and which would, at the same time, permit the producers to maintain the existing scale of wages and preserve the existence of the average independent producer, without increasing prices to the public.

It is believed, therefore, that we must look further for the motive which prompted the director general of railroads to decline to accept the prices recommended. In a statement on April 5 he states: "I have therefore been unwilling to comply with the suggestion which has come from the National Coal Association, that the Railroad Administration withdraw requests for bids and instead undertake to buy its coal at uniform prices for the various districts fixed by some governmental agency."

On April 4, the director general placed himself on record in a long letter, which may be briefly summarized as follows:

(a) That the Industrial Board has no power to impose prices upon the Railroad Administration against its judgment.

(b) That if the Railroad Administration felt that the prices approved by the Industrial Board were such as would in themselves carry the suggestion that no lower prices were likely, it would accept them as a justification for buying liberally.

(c) That such approved prices are not the lowest that may be expected, but that lower levels of prices will be reached if the activities of the Industrial Board are curtailed.

(d) He suggests that the action of the board has resulted in an immunity to the iron and steel industries from the anti-trust laws.

(e) He objects to the form of approval by the board of the iron and steel prices.

(f) He expresses dissatisfaction of the fitness of the members of the board to sanction trade agreements as to prices, carrying the implication that governmental agencies must buy at those prices.

I concur with him fully that the board has no power to impose a price upon the Railroad Administration, against its judgment. I concur also that only the lowest fair prices immediately to be expected should be accepted by the Railroad Administration, or indeed, approved by the Industrial Board; but I can not agree that it is either fair or wise for the government to expect or attempt to force prices lower than the steel prices approved by the Industrial Board. These prices were approved only after a most exhaustive study of costs of production based upon figures in intimate detail furnished by other governmental agencies, and verified by experts in the service of the board. Upon these studies were determined the lowest prices that could be exacted without certainly producing one of the following highly undesirable effects: (a) Creating a market in which only the most powerful highly organized, and lowest cost producers of steel could survive. (b) Reducing the wages of labor throughout the iron, steel

*Abstract of an address at the convention of the U. S. Chamber of Commerce, St. Louis, Mo., on April 29, 1919.

and subsidiary industries. (c) Increasing the prices to the public.

The director general feels, if I understand him, that had the board refrained from an attempt to consider prices from the aspects of labor and other costs, and had acted purely as a mediator to bring sellers and government buyers together, a lower price would have resulted. In this I think the director general is correct, and especially with regard to steel rails, because the Railroad Administration, by reason of its large percentage of consumption in this important commodity, could have practically controlled the market and the price. But such a beating down of prices would entail the very results which the Industrial Board was endeavoring to avoid. No one ever preceded the director general of railroads in supposing that governmental buying or action in aid of governmental buying, as a mediator or otherwise, was any part of the duty of the board. There is not the slightest need for such mediation and the creation of a new governmental agency for such a purpose would be extremely difficult to justify.

I think that in establishing the Industrial Board, a governmental policy was decided, viz: to avoid the chaos and possible panic incident to the fall of an abnormal market by an immediate determination of the lowest prices that can reasonably be expected; that low prices are not now to be secured by reductions in labor wages; that readjustment is to be made with the least possible disturbance to our social situation. I think that the studies and the course of conduct of the board were the only possible means to this end. If I am correct in this then I think that, while the board has no power to impose a price on the Railroad Administration or any other governmental purchasing agency, still it is the duty of the Railroad Administration and other governmental purchasing agencies to support the governmental policy, and, in the instant case, either to establish that a lower price could be had without producing the undesirable results I have recited, or to accept the price decided upon.

My conclusion is that it is not so much in the matter of price that he does not agree with me, as it is in the policy I have stated. Indeed, his apprehension concerning the course of the board in approving prices based on cost studies, rather than in calling sellers and government buyers together and permitting the best possible bargains by barter confirms me in this. The latter alternative overlooks entirely the circumstances that prices so forced to a lower level would, as is abundantly proved by the studies of the board, result in lowered labor wages, or the diversion of business to a few powerful producers, or increased prices to the public. My conclusion is that if the policy of scientific adjustment of prices is wrong, it ought to be abandoned; if it is right, then all departments of the government ought to support it.

The prices approved by the board were not agreed prices. Any producer is free to sell at either higher or lower prices. The action of the government itself in consulting an industry in an effort to obtain a price reduction (as distinguished from an increase) in the public interest can scarcely be denounced as a combination in restraint of trade. It is not a combination at all and even if it were, the result achieved is certainly a fit field for the application of the rule of reason. Whether the board was violating the Sherman law was the responsibility of the board and not of the Railroad Administration and had nothing to do with the question of fairness of the price announced by the board.

As to the form of price approval to which he objects, I have difficulty in following the objection, but the board has repeatedly indicated its willingness to agree to any change of announcement that will meet the wishes of the attorney general.

Successful accomplishment of readjustment problems can be attained only by thorough and complete co-operation on the part of every agency of the government, or industry, and of labor, to reduce values to a stable level by first eliminating voluntarily on the part of industry everything in the way of profits not essential to the maintenance of the average operator, on a reasonable living basis, and thereby enlist the normal purchasing power of the government departments and of the public in making purchases, to the end that normal production may be had and unemployment of labor reduced to a minimum.

As the war called for the co-operation of all, so the adjustment to new peace conditions calls for the same unusual co-operation. To effect co-operation it is essential that there shall be concessions of the special and individual interests. Government departments and industry are called upon to make the first concessions.

The government permitted and required the abnormal conditions essential to the making of war. It must co-operate to restore. The government departments must temporarily yield something of their former customs and practices and the new departments of railroads and shipping, with their large power of purchase, must bend to the task even though pressed for sufficient revenue. At this time the railroads can only do better by immediately doing more to help industrial conditions and they, in turn, must be helped if that shall later be found essential to their well being.

The board recognizes that the purchasing value of the dollar has decreased approximately 40 per cent and that until this purchasing value of the dollar can be increased, compensation to labor should not be reduced; and that compensation to industry—with a normal volume of business—must somewhat exceed the compensation of periods during which the purchasing value of the dollar was not depreciated.

The more efficient or more servicable producers in any industry will receive more compensation and will support the government to a greater degree by the payment of greater taxes and still retain a fair reward for greater efficiency. Those less efficient than the average will pay little or no taxes and may have to sustain losses for a period or discontinue entirely. There is no other fair basis. If the most efficient reduce their prices to the utmost the others will be reduced to a point where they can not exist, and the entire purpose will be defeated and nothing stable will result.

The board believes that any impression upon the part of any one as to what constitutes a fair price or reduction of price at this time which is not based on an investigation of costs under existing conditions, with proper consideration for all, is not valid; that the lowest price obtainable under stress at this time from the most efficient is not a fair measure of what is right and is not in the interest of the nation. It believes further that no department of the government is entitled to a better price than the general public, except to the extent to which costs may be reduced by the quantity of purchase or the conditions of delivery, and at this time, in the national interest even this advantage might be waived.

With reference to the question sometimes asked as to whether or not the board is engaged in price-fixing, it may be said that inasmuch as it does no more than to announce what prices are fair and reasonable under all circumstances, and as low as may be expected for some time to come, it can not be regarded as fixing prices in any sense. Either this board or some other properly constituted body will have to promptly consider these matters, or in my opinion, the consequences to the country will be very grave.

A fire at the Atlantic Coast Line freight station in Bennettville, S. C., on April 21, destroyed the freight house and contents, 8 freight cars, and about 700 bales of cotton; estimated loss $150,000.

Expenses of the U. S. Railroad Administration

Statement for Senate Committee on Interstate Commerce Gives Figures Not Hitherto Public

THE total expenses of the United States Railroad Administration for the year 1918 were $3,647,143, according to a statement filed with the Senate Committee on Interstate Commerce by Director General Hines, and the total payroll for its organization for the month of December was $280,600 for the central administration and $252,500 for the regional administration, or at a yearly rate of $6,390,000. This was for 1,193 officers and employees of the central administration at Washington and 227 officers and employees outside of Washington (including 106 central administration traveling representatives, supervisors and inspectors) and 1,079 officers and employees of the regional administration. This and a large amount of other interesting information not heretofore made public was furnished by Mr. Hines in reply to a series of questions addressed to him by the committee and has been made available by the publication of the concluding instalments of the record of the hearings held before the committee in January and February. The annual office rentals as of December 31 were $74,993 for the central organization and $24,872 for the regional organization. The office expenses exclusive of office rents, traveling expenses, expense for posters, and subscriptions to publications for the year, amounted to $366,953.50 for the central organization and $94,168.43 for the regional organization; traveling expenses were $167,704.99 and $40,134.40, and the expense of posters, and subscriptions to publications was $9,402.36 and $396.99. This was given in reply to a question as to the salaries, office and traveling expenses, and expenses for publications, posters, advertising and publicity.

The Railroad Administration Payroll.

A complete list as of January 1, 1919, of all officers and employees of the central Railroad Administration, under the director general, and of the regional administration, under regional directors, other than those on the regular payrolls of the various railroad companies under federal control, together with their salaries, wages or compensation was furnished the committee. It includes only one "dollar-a-year-man," Theodore H. Price, actuary. The list shows the following:

DIRECTOR GENERAL—GENERAL OFFICE

No.	Occupation	Annual salary
1	Assistant to director general	$10,000
1	Assistant to assistant to director general	3,000
1	Private secretary to director general	6,000
1	Office manager	5,000
1	Assistant private secretary to director general	3,000
2	Secretaries	2,500
1	Superintendent of telegraph	3,000
20	Telegraphers ..$1,500 to	2,000
6	Telephone operators,	$1,080 to 1,200
67	Clerks .....$600 to	2,700
2	Stenographer-clerks,	$1,800 to 2,000
13	Stenographers ..$900 to	1,500
2	Chauffeurs .....$960 to	1,000
26	Laborers .....$300 to	840
20	Messengers .....$600 to	1,200
11	Charwomen .....$180 to	360

ASSISTANT DIRECTOR GENERAL

1	Assistant director general	$25,000
1	Assistant to assistant director general	12,000
1	Assistant to assistant director general	9,000
1	Office assistant	5,000
1	Secretary	4,000
1	Secretary	3,000
1	Accountant	5,000
1	Accountant	3,000
3	Clerks .....$1,200 to	2,000
1	Secretary	2,100
5	Assistant secretaries..	1,800
4	Stenographers, $1,400 to	1,500
3	Messengers ....$600 to	720

FINANCE AND PURCHASES

1	Assistant to director	$9,000
1	Assistant to director	4,000
1	Manager, fire loss and protection	8,400
1	Manager, marine insurance	7,500
1	Manager, forest product section	5,000
1	Treasurer	10,000
1	Cashier	3,600
1	Accountant	3,600
7	Inspectors ....$2,700 to	4,000
1	Lumberman	2,700
30	Clerks .....$1.000 to	3,000
1	Secretary	2,100
1	Secretary	2,000
3	Assistant secretaries..	1,800
1	Assistant secretary	1,680
33	Stenographers. $1,000 to	1,500
2	Laborers	840
7	Messengers .....$480 to	840

CAPITAL EXPENDITURES

1	Director	$25,000
1	Assistant to director	10,600
1	Assistant to director	8,400
1	Accountant	3,900
2	Accountants	3,000
1	Accountant	2,700
1	Secretary and assistant	4,000
1	Chief clerk	4,000
2	Assistant engineers	4,200
1	Assistant engineer	3,900
2	Assistant engineers	3,600
18	Clerks .....$1,200 to	1,920
4	Secretaries	1,800
6	Stenographers. $1,200 to	1,500
2	Messengers	840

DIVISION OF OPERATION (PROPER)

1	Director	$25,000
1	Assistant director	15,000
1	Assistant director	14,000
1	Assistant director	12,000
2	Assistant directors	10,000
1	Assistant to director	7,500
1	Manager, fuel conservation	9,000
1	Manager, operating statistics	7,500
1	Manager, telegraph	7,500
1	Assistant manager, operating statistics	4,800
1	Assistant manager, fuel conservation	7,200
1	Assistant manager, safety	4,500
1	Assistant to manager, fuel conservation	6,000
2	General supervisors, equipment	7,500
1	General supervisor, car repairs	6,000
7	Supervisors, equipment	4,800
6	Assistant supervisors, equipment	3,900
7	Supervisors, safety	3,000
12	Supervisors, car repairs	4,200
1	Supervisor, troop movement	3,600
1	Supervisor, troop routing	6,000
1	Supervisor, coding	3,000
1	Assistant engineer	4,800
1	Inspector of transportation	7,500
6	Supervisors, fuel conservation	4,800
1	inspector of transportation	5,000
2	Assistant supervisors, fuel conservation	3,900
1	Assistant supervisor, fuel conservation	3,600
1	Inspector	2,400
1	Inspector	1,800
1	Statistician	4,200
2	Statisticians	3,000
1	Secretary and assistant	3,900
1	Secretary and assistant	3,000
1	Chief clerk	4,500
1	Office engineer	4,200
1	Chief clerk	3,600
1	Assistant chief clerk	3,600
124	Clerks .....$720 to	3,600
1	Assistant secretary	2,400
1	Secretary	2,100
2	Secretaries	1,800
67	Stenographers ..$960 to	1,500
2	Laborers	840
6	Messengers ....$480 to	600

DIVISION OF OPERATION (CAR SERVICE)

1	Manager	$10,000
5	Assistant managers	9,000
1	Assistant manager	7,500
1	Assistant manager	6,500
1	District manager	5,400
1	District manager	4,800
1	Assistant to manager	3,600
1	Assistant	3,000
1	Special assistant	6,000
1	Chief inspector	3,300
1	Special inspector	3,000
13	Inspectors	2,400
10	Inspectors	1,800
2	Special representatives	4,000
1	Secretary	3,300
1	Secretary	3,000
9	Office assistants $3,000 to	3,600
91	Clerks .....$720 to	3,000
2	Secretaries	1,800
2	Secretaries	1,620
66	Stenographers ..$900 to	1,500
8	Messengers ....$480 to	900

DIVISION OF TRAFFIC

1	Director	$25,000
1	Assistant director	15,000
1	Assistant director	12,500
1	Assistant director	7,200
1	Manager, Food Administration	20,000
1	Manager, War Industries Board	18,500
1	Manager, inland traffic, War Department	18,000
1	Manager, Fuel Administration	13,200
1	Manager, express and mail	12,000
1	Manager, Navy Department	8,000
1	Manager, Shipping Board	7,200
2	Managers, fuel oil	6,000
1	Manager, inland traffic, United States military railroads	4,200
1	Manager, War Trade Board	3,000
1	Assistant	7,500
1	Assistant	7,200
4	Assistants	6,000
3	Assistants	4,800
1	Assistant	4,200
1	Assistant	4,000
1	Assistant	3,600
2	Assistants	3,000
1	Assistant, War Department	6,000
1	Assistant, War Department	3,300
1	Assistant, Navy Department	3,600
1	Assistant, Navy Department	3,000
3	Assistants, Fuel Administration	4,800
1	Assistant, Fuel Administration	4,200
1	Assistant, Food Administration	5,000
1	Assistant, Food Administration	3,600
1	Assistant, Food Administration	2,400
1	Assistant, War Industries Board	5,000
1	Assistant, War Industries Board	3,000
1	General agent	4,800
1	General agent	4,500
1	General agent	4,000
2	General agents	3,600
2	General agents	3,300
1	General agent	2,700
4	General agents	2,100
1	Secretary	3,000
1	Secretary	2,820
1	Chief clerk	3,600
1	Chief clerk	3,300
45	Clerks .....$840 to	3,600
1	Secretary	2,400
1	Secretary	2,100
8	Secretaries	1,800
21	Stenographers..$1,200 to	1,500
1	Laborer	840
7	Messengers .....$480 to	780

Public Service and Accounting

1	Manager, accounting.	$9,000	11	Accountants	2,700
1	Manager, Short Line section	8,500	1	Accountant	2,500
1	Auditor	7,500	8	Accountants	2,400
1	Special rate expert, Short Line section.	7,200	12	Accountants	2,100
2	Traffic assistants	6,000	2	Accountants	2,000
1	Accountant	6,500	1	Accountant	1,800
3	Accountants	6,000	1	Accountant	1,500
4	Accountants	4,200	1	Chief clerk	3,900
1	Accountant	3,900	73	Clerks ..... $840 to	2,700
2	Accountants	3,600	1	Secretary	1,680
1	Accountant	3,300	1	Stenographer and clerk	1,620
11	Accountants	3,000	18	Stenographers.. $1,200 to	1,500
1	Accountant	2,880	1	Laborer	840
			6	Messengers ..... $480 to	720

Division of Labor

1	Director	$25,000	1	Secretary	2,500
2	Assistants	4,000	1	Chief clerk	2,700
1	Assistant	5,000	4	Field agents	2,700
2	Assistant	4,000	3	Reporters	2,100
1	Manager, women's section	5,000	3	Assistant reporters	1,800
7	Members of boards.	7,500	8	Clerks ..... $1,080 to	1,800
4	Representatives	6,000	2	Secretaries	2,100
3	Secretaries of railway board of adjustment	3,000	17	Stenographers.. $1,200 to	1,500
			1	Underclerk	900
			2	Messengers ..... $720 to	840

Division of Law

1	General counsel	$25,000	1	Attorney	5,000
3	Assistant general counsel	10,000	4	Attorneys	3,000
1	Assistant to general counsel	7,500	1	Attorney	2,200
1	Assistant to general counsel	6,000	1	Inspector	4,000
4	Assistants	4,000	1	Inspector	3,600
1	Manager, claims and property protection..	7,500	2	Inspectors	3,500
1	Chief, secret service and police	7,500	4	Inspectors	3,000
2	Attorneys	7,500	2	Chief clerks	3,000
2	Attorneys	6,000	1	Chief clerk	2,500
			11	Clerks ..... $900 to	2,000
			2	Secretaries	1,800
			19	Stenographers.. $1,200 to	1,500
			3	Messengers	600
			3	Inspectors	2,100

Actuary to Railroad Administration

1	Actuary	$1	1	Correspondent	2,400
1	Assistant actuary	6,000	8	Clerks ..... $1,100 to	2,400
1	Correspondent	4,800	16	Stenographers.. $1,200 to	1,500
1	Correspondent	4,000	1	Messenger	800
1	Correspondent	3,000			

Division of Inland Waterways

1	Director	$25,000	1	Clerk	2,100
1	Traffic manager	4,000	4	Stenographers.. $1,020 to	1,500
1	Secretary	3,000	3	Laborers ..... $720 to	840
2	Inspectors	3,600			

Board of Railroad Wages and Working Conditions

6	Members of board...	$10,000	1	Chief clerk	3,000
1	Secretary of board...	6,000	19	Clerks ..... $720 to	2,700
2	Wage schedule experts	5,000	5	Secretaries to members	1,800
2	Examiners	6,000	9	Stenographers.. $1,200 to	1,500

Eastern Region

1	Regional director	$50,000	2	Transportation inspectors	2,400
1	Assistant regional director	35,000	1	Telegraph and telephone engineer	4,200
1	District director	35,000	2	Engineers	4,800
1	District director	30,000	1	Engineer	2,700
1	Chairman budget committee	25,000	1	Engineer	2,520
1	Traffic assistant	20,000	1	Supervisor of transportation	2,700
1	Mechanical assistant..	20,000	2	Members sub-committee—Forest products	4,200
1	Resident traffic assistant	15,000	1	Freight representative	3,600
1	Marine director	15,000	1	Freight representative	3,000
1	Assistant mail and express	10,000	1	Inspector	2,700
1	Terminal manager	8,400	1	Inspector	2,100
1	Terminal manager	8,000	1	Statistician	5,000
1	Terminal manager	7,200	1	Accountant	3,000
1	Terminal manager	5,400	1	Accountant	1,950
1	Terminal manager	5,000	1	Accountant	1,800
1	Staff assistant to traffic assistant	7,200	1	Chartermaster	2,700
1	Assistant to traffic assistant	4,200	1	Tug despatcher	2,700
1	Supervisor of stores.	6,000	1	Tug despatcher	2,400
1	Transportation assistant	6,000	5	Tug despatchers	2,100
1	Operating assistant...	4,800	5	Tug despatchers	1,800
1	Operating assistant...	4,200	1	Secretary	3,600
1	Special agent	8,000	2	Secretaries	3,000
1	Executive assistant...	6,500	1	Secretary	2,700
1	Executive assistant...	4,200	1	Secretary	2,610
1	Office assistant	6,000	1	Secretary	2,400
1	Office assistant	5,000	1	Chief clerk	4,800
1	Office assistant	3,600	1	Chief clerk	4,000
1	Secretary	6,000	1	Chief clerk	3,600
1	Special assistant	5,000	2	Chief clerks	3,300
2	Assistants	4,200	3	Chief clerks	3,000
1	Assistant	3,600	1	Chief clerk	2,700
1	Transportation inspector	4,000	1	Chief clerk	2,400
3	Transportation inspectors	3,600	111	Clerks ..... $840 to	3,000
5	Transportation inspectors	3,000	78	Stenographers... $720 to	2,250
			16	Telegraph and telephone operators. $840 to	1,800
			1	Laborer	1,100
			15	Messengers ..... $480 to	780

Allegheny Region

1	Regional director	$50,000	1	Transportation assistant	10,000
1	Assistant regional director	20,000	1	Engineering assistant.	10,000
1	Traffic assistant	20,000	1	Assistant to traffic assistant	5,400
1	Operating assistant...	20,000			
1	Mechanical assistant..	10,000	3	Terminal managers ..	10,000

Allegheny Region

1	Assistant terminal manager	5,400	1	Freight service representative	3,300
1	Assistant to terminal manager	3,600	1	Passenger service representative	3,000
1	Supervisor operating division	4,800	1	Perishable traffic agent	3,600
2	Supervisors operating division	3,600	1	Office manager	4,500
1	Supervisor freight service	4,200	1	Statistician	5,000
1	Freight supervisor	4,200	1	Statistician	2,607
1	Supervisor car repairs	4,200	5	Secretaries	3,000
1	Supervisor locomotive repairs	4,200	1	Secretary	1,920
1	Supervisor train movement	3,000	1	Secretary	2,100
1	Engineer	4,200	2	Secretaries	1,800
1	Chief of wage information	4,200	1	Chief clerk	1,800
1	Inspector of yards	4,500	2	Chief clerks	3,600
1	Inspector of piers	3,900	1	Chief clerk	3,480
			2	Chief clerks	3,000
			1	Chief clerk	2,400
			1	Chief clerk	1,800
			51	Clerks, ... $1,050 to	2,700
			23	Stenographers. $1,050 to	2,220
			5	Messengers ..... $660 to	780

Pocahontas Region

1	Regional director	$40,000	2	Secretaries	2,280
1	Traffic assistant	17,500	1	Chief clerk	3,100
1	Transportation assistant	10,800	1	Chief clerk	3,300
1	Chairman regional purchasing committee..	10,000	1	Chief clerk	3,000
1	Member regional purchasing committee..	7,800	11	Clerks ..... $1,326 to	2,700
			3	Stenographers. $1,020 to	1,380

Southern Region

1	Regional director	$40,000	1	Assistant to regional purchasing committee	3,600
1	Traffic assistant	15,000	1	Inspector instructor	3,000
1	Operating assistant...	10,000	3	Inspector instructors..	2,100
1	Staff officer, mechanical	7,500	1	Secretary	2,700
1	Staff officer, engineering	6,000	1	Secretary	2,100
1	Staff officer, traffic	6,000	1	Secretary	1,950
1	Assistant to traffic assistant	3,600	1	Secretary	1,800
2	Terminal managers	6,000	5	Secretaries	1,620
3	Terminal managers ..	5,000	1	Chief clerk	4,500
1	Terminal manager	2,500	2	Chief clerks	3,600
1	Assistant to terminal manager	3,600	1	Chief clerk	3,000
1	Staff officer, accounting	5,100	1	Chief clerk	2,400
1	Accountant	3,600	2	Chief clerks	2,100
1	Accountant	2,400	42	Clerks ..... $720 to	3,600
1	Engineer	4,200	25	Stenographers.. $960 to	2,100
1	Terminal trainmaster.	3,900	6	Telegraph and telephone operators.... $1,080 to	1,734
1	Traveling representative	4,200	4	Chiefs ..... $1,098 to	1,319
1	Traveling representative	3,000	3	Porters ..... $1,098 to	1,269
			4	Messengers ..... $600 to	720

Northwestern Region

1	Regional director	$50,000	1	Inspector	3,000
1	Assistant regional director	20,000	1	Correspondent	2,700
1	District director	25,000	1	Accountant	3,600
1	Traffic assistant	20,000	1	Accountant	3,300
1	Traffic assistant	8,000	1	Supervisor of car service	4,500
1	Traffic supervisor	5,000	1	Assistant supervisor of car service	2,700
1	Operating assistant...	6,000	1	Supervisor of transportation	4,500
1	Engineering assistant.	6,000	1	Assistant supervisor of transportation	3,600
1	District manager	10,000	1	Supervisor of transportation	4,200
1	Car service assistant..	6,000	1	Supervisor	3,000
1	Terminal manager	10,000	1	Freight house supervisor	2,700
1	Terminal manager	9,000	1	Office assistant	4,800
1	Terminal manager	7,000	1	Office manager	3,600
1	Terminal manager	5,400	3	Chief clerks	3,000
1	Acting terminal manager	4,800	5	Chief clerks	2,700
1	Assistant to terminal manager	3,600	1	Chief clerk	2,139
1	Assistant to traffic assistant	3,600	2	Chief clerks	2,100
1	Engineer	4,300	1	Secretary	2,700
1	Engineer	3,600	1	Secretary	2,400
2	Engineers	3,600	1	Secretary	2,100
2	Engineers	3,000	217	Clerks ..... $540 to	2,700
1	Assistant to district director	4,200	3	Stenographers. $1,020 to	2,100
1	Joint export agent	4,200	6	Telegraphers	1,591.20
1	Car agent	2,700	1	Cook	1,320
1	Field man	3,600	1	Porter	1,200
3	Inspectors	2,400			
2	Inspectors	2,100			

Central Western Region

1	Regional director	$50,000	1	Inspector of transportation	3,600
1	Assistant regional director	20,000	1	Traffic inspector	3,300
1	District director	35,000	1	Inspector, telegraph and telephone	2,400
1	Traffic assistant	20,000	1	Chief tie inspector	2,400
1	Engineering assistant.	12,000	1	Chief treatment inspector	2,400
1	Transportation assistant	8,400	5	Treatment inspectors..	1,800
1	Mechanical assistant..	4,000	1	Accountant	3,600
1	Terminal manager	3,900	1	Accountant	2,400
1	Labor representative..	5,000	1	Office manager	4,000
1	Routing assistant	7,500	1	Chief clerk	3,300
1	Assistant to district director	5,000	1	Chief clerk	3,000
1	Transportation efficiency	3,300	2	Chief clerks	2,700
1	Assistant to traffic assistant	4,200	1	Chief clerk	2,100
3	Engineers	3,000	1	Chief clerk	2,000
1	Supervisor of loss and damage	3,900	1	Chief clerk	1,980
			1	Secretary	2,640
			3	Secretaries	2,400
			2	Secretaries	1,800

CENTRAL WESTERN REGION

2	Secretaries	1,620	1	Chef	1,380
35	Clerks	$720 to 2,220	1	Porter	1,320
29	Stenographers.	$1,020 to 1,620	1	Cook	1,269

SOUTHWESTERN REGION

1	Regional director	$50,000	1	Telegraph and telephone engineer	3,600
1	Assistant regional director	15,000	1	Special investigator	(1)
1	District director	30,000	1	Office manager	4,200
1	Traffic assistant	20,000	2	Chief clerks	3,600
1	Engineering assistant	12,000	3	Chief clerks	3,000
1	Supervisor transportation	4,800	1	Chief clerk	2,400
1	Supervisor car service	4,200	1	Chief clerk	2,100
1	Supervisor oil traffic	4,500	1	Secretary	2,100
1	Supervisor coal traffic	4,800	31	Clerks	$720 to 3,000
1	Manager, tie and bridge	3,600	29	Stenographers	$900 to 2,400
2	Inspectors, tie and bridge	2,400	2	Messengers	$126 to 600
2	Assistant inspectors, tie and bridge	1,800	1	Chef	1,100
			3	Porters	$1,020 to 1,100

[1] $7.50 per day.

Recapitulation

CENTRAL ADMINISTRATION

	Employees
Office director gneral	175
Office of director general	175
eral	24
Division of finance and purchases	94
Division of capital expenditures	44
Division of operation (proper)	281
Division of operation (car service)	260
Division of traffic	143
Division of public service and accounting	167
Division of labor	63
Division of law	71
Office of actuary to Railroad Administration	31
Division of inland waterways	13
Board of railroad wages and working conditions	45
Total central administration	1,411

REGIONAL ADMINISTRATION

	Employees
Eastern region	320
Allegheny region	126
Pocahontas region	24
Southern region	126
Northwestern region	286
Central Western region	112
Southwestern region	91
Total, regional administration	1,085
Grand total	2,496

Railroad Payroll Charges by Months

The total payroll for 1918, including charges to operating expenses and all other accounts for the Class I roads under federal control, was $2,593,085,502, an increase over that for 1917 of $874,339,367 or 50.9 per cent. The percentages of increase by regions were as follows: Eastern, 49.1; Allegheny, 57.1; Pocahontas, 60.5; Southern, 59.8; Northwestern, 44.9; Central Western, 44.9; Southwestern, 50.2. A statement showing the payroll and the increases by months, including back pay, is as follows:

	1918	1917	Amount	Per cent
Miles of road operated	231,052	230,911	141	0.1
Total pay roll charges:			Increase	
January	$165,770,977	$128,139,997	$37,630,980	29.4
February	157,638,852	121,035,187	36,603,665	30.2
March	169,763,097	133,413,505	36,349,592	27.2
April	166,887,325	137,401,108	29,486,217	21.5
May	172,163,116	144,574,915	27,588,201	19.1
June	258,632,637	145,191,893	113,440,744	78.1
July	228,787,992	145,443,525	83,344,467	57.3
August	252,596,016	152,537,924	100,058,092	65.6
September	261,948,245	146,985,956	114,962,289	78.2
October	264,030,246	154,811,533	109,218,713	70.6
November	247,991,874	153,090,395	94,901,479	62.1
December	246,875,125	156,120,197	90,754,928	58.1
Total	2,593,085,502	1,718,746,135	874,339,367	50.9

This statement includes payroll charges for other purposes, e. g., for construction, as well as for operating expenses. The statement does not reflect the amount of increase in payrolls due to increases in the rates of pay, but has to include without segregation, all influences (e. g., number of employees, amount of overtime, state of experience of employees, etc.), making for a difference in total payroll in 1918 as compared with 1917.

Beginning with the month of April, figures for 1917 contain back pay retroactive to January 1, under the Adamson Act. From June to November, inclusive, figures for 1918 contain retroactive wage payments due to General Order No. 27 and its supplements.

Although changes were made during December, 1918, in the grouping of roads by regions, the December figures on this statement are made up on the basis of the same grouping as was in effect November 30.

Wage Increases Charged to Operating Expenses

The table below is an estimate of the increase in payroll charges to operating expenses for the year, due to advance in wage rates over those in effect December 31, 1917, as authorized by General Order No. 27, supplements thereto, and collateral increases made necessary thereby, (not including supplements 12 and 13 promulgated in December):

Supplement No. 4 was that giving a supplemental increase to the shop employees. Supplement 7 was for clerical forces and others, and Supplement 8 was for maintenance of way employees.

Increase in Number of Employees

Another statement filed with the committee gives the number of employees for the Class I roads under federal control by classes in October, 1917, December, 1917, October, 1918, and January, 1919. In October, 1917, the total was 1,733,115; in December, 1917, it had fallen to 1,703,684; in October, 1918, it had increased to 1,855,911, an increase of 122,796, or 7 per cent in a year, and in January, 1919, it had been reduced to 1,843,530, an increase of 139,846 or 8.3 per cent as compared with December, 1917. The figures regarding increases in wages and number of employees do not agree with those in a later statement compiled by the operating statistics section and published in these columns last week, based on revised reports which showed the number of employees on January, 1919, as 1,848,774.

The information is also compiled by regions and by railroads.

In reply to a question by the committee as to whether any discretion is lodged with the regional directors and federal managers to employ men at current rates of pay in their respective territories, or whether all rates of pay are fixed by the director general, the following statement was made:

The rates of pay, generally speaking, are fixed in general orders by the director general.

As to personnel and salaries in the organization of regional directors, regional directors have authority to fix salaries up to but not including $3,000 per annum and to select persons to fill these positions. All salaries of $3,000 per annum or over are reported by the regional directors to the central administration at Washington.

WAGE INCREASES CHARGED TO OPERATING EXPENSES

Operating expense account	Estimated payroll charges, excluding increases	Estimated increases charged to 1918 operating expenses: General Order No. 27 and Supplement 4	Supplements 7 and 8	Collateral increases	Total estimated increase	Per cent total increases over rates of Dec., 1917
Maintenance of way and structures	$321,791,000	$53,634,000	$30,072,000	$12,584,000	$96,290,000	29.9
Maintenance of equipment	433,594,000	192,125,000	5,485,000	4,288,000	201,898,000	46.6
Traffic expenses	24,508,000	2,870,000	619,000	131,000	3,620,000	14.8
Transportation:						
Superintendence and train despatching	53,874,000	7,806,000	1,701,000	1,514,000	11,021,000	20.5
Station forces, including telegraph and signal operation	232,455,000	41,301,000	12,968,000	2,979,000	57,248,000	24.6
Yardmasters and clerks	29,929,000	5,125,000	2,021,000	1,342,000	8,488,000	28.4
Yard conductors, brakemen, and switchtenders	99,704,000	29,852,000	377,000	198,000	30,427,000	30.5
Yard enginemen and motormen	56,055,000	15,651,000	34,000	43,000	15,728,000	28.1
Train enginemen and motormen	164,004,000	36,724,000	85,000	154,000	36,963,000	22.5
Trainmen	173,404,000	50,417,000	98,000	94,000	50,609,000	29.2
Enginehousemen, yard and road	75,162,000	26,675,000	5,113,000	1,139,000	26,987,000	35.9
All other transportation accounts	87,893,000	22,010,000	5,141,000	1,712,000	28,863,000	32.8
Total transportation	$972,480,000	$329,561,000	$27,538,000	$9,235,000	$266,334,000	27.4
General expenses	$70,480,000	$10,464,000	$4,091,000	$855,000	$15,410,000	21.9
Total all operating expenses	$1,822,793,000	$488,654,000	$67,805,000	$27,093,000	$583,552,000	32.0

As to positions where the salary is $5,000 per annum or over, the persons selected and the salaries are submitted by the regional directors to the central administration at Washington. Federal managers have authority to pass upon promotions and appointments to what are known as official positions, and to fix salaries of employees where the salary is less than $3,000 per annum, except where the employee falls within one of the classes covered by general wage orders.

With respect to salaries of $3,000 per annum or over, paid employees under the jurisdiction of the several federal managers, the federal managers submit their recommendations to the regional directors, who have authority to pass finally upon such matters in respect of positions carrying salaries up to but not including $5,000 per annum, except where the employee falls within one of the classes covered by general wage orders.

As to positions where the salary is $5,000 per annum or over, in the organization of the federal managers, the persons selected and salaries paid are submitted by the regional director, with his recommendations, to the central administration, where they are finally acted upon.

As to maintenance of way employees and clerks, maximum and minimum rates of pay are fixed in general orders of the director general, but where inequalities are found to exist the regional directors have authority to make changes within such maximum and minimum, in order to abolish the inequalities.

With respect to telegraphers, exclusive agents, and other classes of employees covered by Supplement 13 to General Order No. 27, regional directors also have authority to make adjustments where glaring inequalities are found to result from the application of this order.

Rails and Ties

The following information was furnished to the committee regarding the rails and ties bought and inserted in 1918; as compared with 1917 and 1916:

Rails and Ties Used Calendar Years 1916, 1917 *and* 1918.

1. Number of ties bought and supplied calendar year—		
1916		96,665,800
1917		93,177,208
1918		82,871,551
2. Number of crossties actually laid in all tracks calendar year—		
1916		90,140,016
1917		81,154,529
1918		78,958,224
3. Number of tons new rail laid and track-miles calendar year—		
1916	tons	1,450,952
	track miles	9,831
1917	tons	1,233,031
	track miles	8,233
1918	tons	1,097,277
	track miles	7,431
4. Number of tons new rail on hand Dec. 31—		
1918		369,223
1917		460,865

5. Number of track miles new rail on hand by weights per yard:

Weight per yard Pounds	On hand Dec. 31, 1918 Track miles	Weight per yard Pounds	On hand Dec. 31, 1918 Track Miles	Weight per yard Pounds	On hand Dec. 31, 1918 Track Miles
141	....	101	.....	75	35.98
136	10.70	100	535.27	74	4.00
135	4.10	96	3.95	72	27.00
130	96.26	93	.....	70	11.98
125	.12	91	.....	67½ (Russian)	7.03
120	.60	90	1,218.91		
110	5.30	85	342.71	Total	2,544.41
107	18.86	80	160.89		
105	60.75	76	.....		

Car and Locomotive Repairs

Statements showing comparisons regarding car and locomotive repairs in 1918 and 1917 are given in the following table:

Repairs to Locomotives and Cars Combined, 12 Months, January to December, 1917-1918

	1918	1917
Average number of serviceable freight locomotives	30,824	30,378
Average number freight locomotives in or awaiting shop	4,624	4,286
Per cent freight locomotives in or awaiting shop	15.0	14.8
Average number freight cars in service	2,430,786	2,363,309
Average number freight cars in or awaiting shop	138,989	133,252
Per cent of freight cars in or awaiting shop	5.7	5.6
Total number of locomotives receiving repairs requiring more than 24 hours	235,522	193,924

Comparison of Freight Cars Repaired by Railroads Under Federal Control, 1917 and 1918

(1) Number of freight cars repaired by 133 Class I railroads and 22 Class II railroads, showing separation between light and heavy repairs:

	Light	Heavy	Total
1917	29,207,081	1,941,380	31,148,461
1918	27,650,214	2,005,926	29,656,140
Increase, 1918 over 1917	.....	64,546	.....
Decrease, 1918 over 1917	1,556,867	.....	1,492,321

(2) Number of freight cars repaired by 6 Class I railroads that were unable to give complete separation between light and heavy repairs:

1917	1,112,966
1918	1,154,085
Increase, 1918 over 1917	41,119

(3) Total number of freight cars repaired by 161 railroads, representing ownership of 2,357,208 cars:

1917	32,261,427
1918	30,810,225
Total decrease, 1918 over 1917	1,451,202

(*a*) Referring to item (1), showing decrease of 1,556,867 light repairs, 1918 over 1917, with an increase of 64,546 heavy repairs: The reduction in light repairs is due to reporting light running repairs, requiring less than one 1-man hour to repair, in 1917, which were not permitted reported in 1918.

(*b*) Item (2) shows substantial increase, 1918 over 1917.

(*c*) Item (3). Explanation for total decrease, 1918 over 1917, is given in paragraph (*a*).

A statement giving the subdivision of the accounts entering into the transportation expenses for the calendar year 1918 as compared with 1917 is as follows:

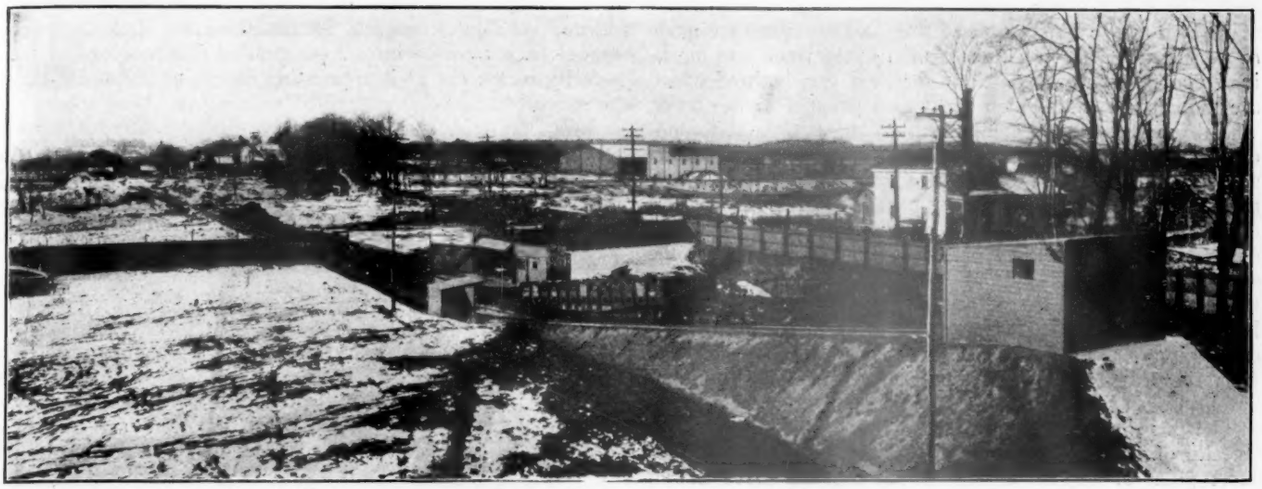
Transportation Expenses:	1918	1917	Increase	Per Cent.
Supervision	$78,272,839	$55,639,797	$22,633,042	40.7
Station service	311,524,168	224,084,008	87,440,160	39.0
Yard service	370,383,523	265,390,430	104,993,093	39.5
Train service	1,029,558,191	790,515,022	239,043,169	30.2
Miscellaneous transportation	93,225,618	73,880,451	19,345,167	26.2
Casualties	106,562,854	78,948,522	27,614,332	35.0
Joint facilities	22,221,745	15,905,582	6,316,163	39.7
	$2,011,748,938	$1,504,363,812	$507,385,126	33.7

While revenues increased 21.4 per cent, expenses increased 40.3 per cent. The subdivision of the other expense accounts is not given. Maintenance of way and structures increased 46.8 per cent; maintenance of equipment, 60.5 per cent; traffic expenses decreased 25.3 per cent, and general expenses increased 15.7 per cent.

The following officers were elected by the Denver (Colo.) Commercial Traffic Club at its annual election on April 16: President, Robert C. Quest, of the F. C. Ayers Mercantile Company; vice-president, T. A. Dinkel, of the Longmont Farmers' Milling & Elevator Company and secretary-treasurer, C. E. Page, of the Hendrie & Bolthoff Company.

Photograph by Press Illustrating Service, Inc., N. Y.

General View from the 89th Division Headquarters in Germany



Draft Gear Test Plant of the T. H. Symington Company

Freight Car Draft Gear Test Demonstrations

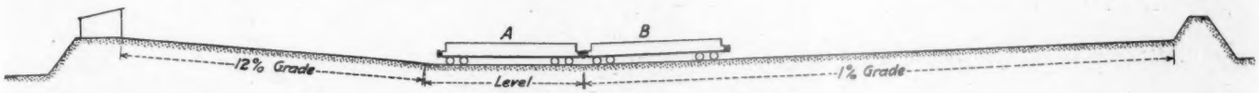
Showing Methods to Be Followed by the Inspection and Test Section in Official Investigations

ON APRIL 10 AND 11 a series of public demonstrations were conducted by the Inspection and Test Section of the Division of Operation, United States Railroad Administration, at the draft gear testing plant of the T. H. Symington Company, Rochester, N. Y. The manufacturers of draft gears, the draft gear committee of the Mechanical Section of the American Railroad Association, the mechanical committee of the Railroad Administration and a number of railroad officers were present. The purpose of the demonstration was to disclose in advance of a series of official draft gear tests to be conducted at this plant, the methods of testing which will be followed, and particularly to demonstrate the operation of the devices which have been developed to graphically record the action of the draft gear between two cars, one moving and the other standing at the instant of impact.

For a period of several months the Inspection and Test Section has been engaged in testing draft gears under the direction of B. W. Kadel, assistant engineer, the program including tests both with the static machine and under the drop, and the work to be done on the Symington plant covers the next series of tests in the draft gear programs, in all of which the draft gear committee of the Master Car Builders' Association is co-operating.

The test plant of the T. H. Symington Company was built to facilitate the testing of draft gears under as nearly as possible actual service conditions. It consists of a test track, one end of which is laid out on a 12 per cent grade for accelerating purposes, followed by a section of level track at the other end of which is a one per cent ascending grade. Two 50-ton steel frame gondola cars with wood floors and siding are used in the tests. The facilities for handling the cars consist of a motor driven drum hoist housed at the top of the 12 per cent grade, the cable from which is attached to a special puller car to which the test car is attached in such a way that the coupling may be tripped at any predetermined point on the grade; a motor driven capstan winch beside the track is used to spot the cars on the level track.

Both of the 50-ton gondola cars are loaded so that each has a gross weight of 143,000 lb. The adjoining ends are arranged so that they may be equipped with any draft gear of standard dimensions, or with solid buffers. The moving car, designated as the *A* car, is drawn up the inclined track and released at stations predetermined to produce whatever velocity of impact is desired. The stationary car, designated as the *B* car, is placed at a fixed point on the track so that the performance of the cars during the period of impact is comparable for all tests. This position is chosen so that the *B* car stands fully on the one per cent decelerating grade when struck by the *A* car, while the latter moves upon level track during the period of impact and for a distance of approximately six feet before the instant at which the buffing faces of the two drawheads come in contact. The cars are equipped with flat face buffing stems instead of standard couplers, in order to produce a normal impact on the buffing coupler mechanism without coupling the cars.



Profile of the Test Track

The method of recording and comparing the action of various draft gears under impact between the two cars is a development recently worked out, and the apparatus built, jointly by the Inspection and Test Section and the engineers of the T. H. Symington Company.

The outstanding feature of the new recording apparatus is that a direct and continuous record is made of the movement of both cars during a period beginning before the instant of impact and continuing after the final separation

of the two cars. The records of the car movements are made by pencils traveling in a line parallel to the track and marking upon revolving drums, one for each car, both of which are mounted on a common shaft also parallel to the track. The drum shaft is worm driven by a 32-volt shunt-wound, direct-current motor, which receives its power from a storage battery. The paper speed of the drum is approximately 31 in. per second. The pencil holders for the two drums are mounted on guides parallel to the axis of the drums and are moved by bars which project out from the sides of the cars. Provision is made for horizontal movement of these bars at right angles to the longitudinal center line of the car. Guides attached to the instrument base engage a lever suitably attached to each bar to withdraw it from contact with the pencil holder before it can be moved beyond either end of the cylinder.

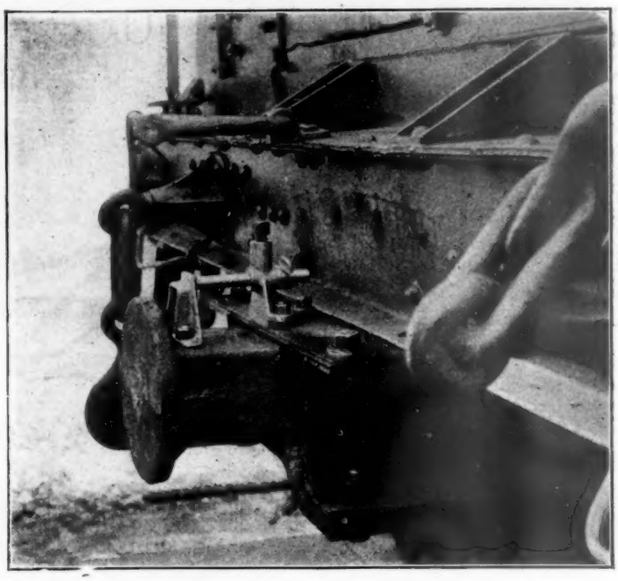
The line drawn upon the first or *A* drum shows the exact velocity of the *A* car at the moment of impact, denotes the exact point of impact, shows by the type of curve drawn the rate of retardation of this car and finally gives the velocity of the car after the two cars have parted. The line drawn upon the *B* drum shows the rate of acceleration of the *B* car and shows the final velocity of this car as the two cars part. Curves made in the same test upon the *A* and *B* drums are reproduced in Figs 1 and 2, respectively.

When a test is to be made the two cars are spotted with the buffing faces in contact and all slack is eliminated from the draft gears and attachments. With the drums standing the pencil carriages are given a slight movement along the guides to draw common reference lines, 3-3, Fig. 1, and 4-4, Fig. 2, by means of which the two cards later may be synchronized as to time. The pencils are then set on both drums in the positions which they will occupy against the bars projecting out from the sides of the cars at the instant the buffing faces between the two cars come in contact. With the pencils thus located the drums are rotated to draw the common datum line, 1-1, Fig. 1, and 2-2, Fig. 2, upon these drums. Line 2-2 on the *B* drum indicates the standing position of the B car; line 1-1 on the A drum indicates the position of the *A* car at the first instant of contact with the *B* car. By means of these datum lines the cards can be matched as to their positions along the track.

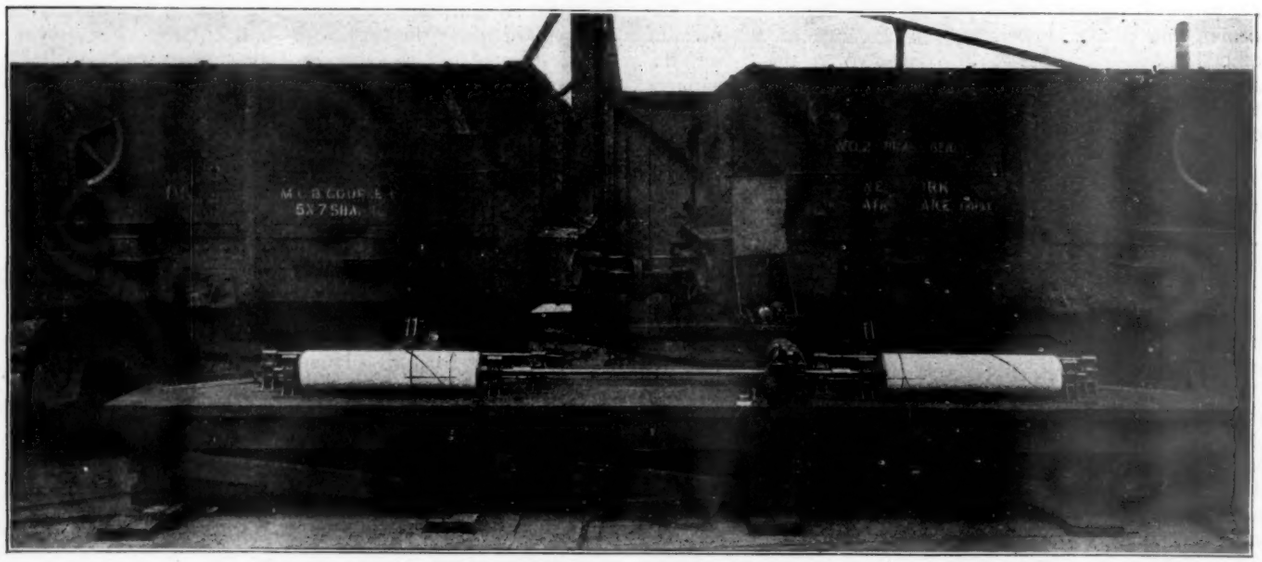
The test is then run by hauling the *A* car up the 12 per cent grade, releasing it at the point required to produce the desired velocity of impact, the pencil on the *A* drum being moved back from its impact position so that a record of the velocity of the car as it approaches the point of impact may be obtained.

From the curves a study can be made of the car movements throughout the cycle of draft gear movement and the velocity of the *A* car at the moment of impact can be accurately determined, as well as the velocities of both cars beyond the point of separation. Thus on the card for the *A* car, Fig. 1, the angularity of the line below the datum line denotes the exact velocity of the striking car, and the weight being known, its energy as a moving body can be accurately determined.

Referring again to Fig. 1, at point 5 it is known that the *A* car first met the *B* car, that the draft gears started to close and consequently that its velocity began to decrease. Assuming that the draft gear action is entirely smooth and that



The Flat Face Buffer and the Draft Gear Travel Gage



Instrument for Recording the Movements of the A and B Cars on Time-Distance Coordinates

the bombardments of static testing are not present in this service, it is possible to determine from the shape of the curved line denoting the decrease in velocity of this car, the approximate forces which must have been at work to produce the retardation shown between any two points on the time axis. From the final angularity of the approximately straight line beyond the point of separation of the two cars can be determined the velocity of the *A* car after the draft gears have parted and the number of foot pounds of energy still stored in this car. On cards made from certain draft gears the *A* car comes to rest as denoted in Fig. 1 before it has traveled beyond the limit of the pencil movement on the *A* drum.

Referring to Fig. 2, from the curve drawn by the *B* car can be determined the rate of acceleration of this car and its final velocity when the cars part. Knowing this velocity and the weight of the car it is possible to calculate the energy transferred from the *A* car to the *B* car. From Figs. 1 and 2 it is thus possible to determine the actual energy absorption which has taken place during the draft gear cycle.

The common datum and reference lines drawn on the two cards prior to the test makes it possible exactly to superimpose one curve upon the other, thus producing a graphic record of the relationship of the cars to each other throughout the significant range of movement. This has been done in Fig. 3.

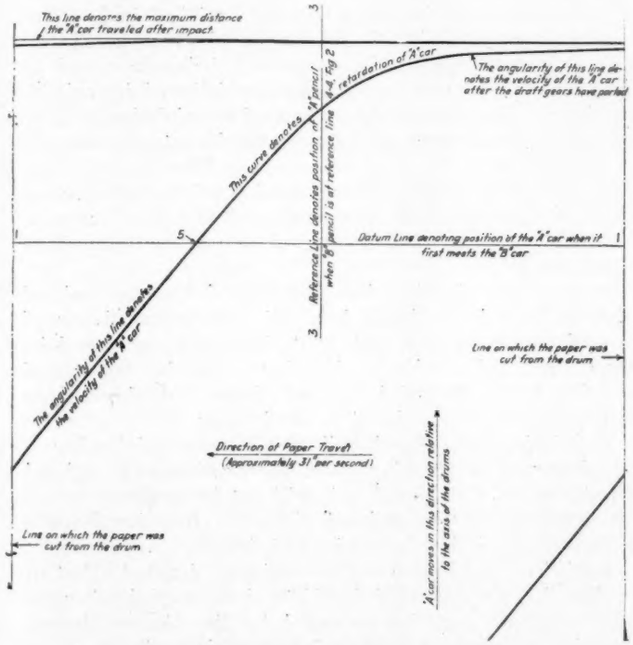

This line denotes the maximum distance of the "A" car traveled after impact
The angularity of this line denotes the velocity of the "A" car after the draft gears have parted
This curve denotes position of "A" pencil
Reference Line denotes position of "A" pencil when "B" pencil is at reference line
Datum Line denoting position of the "A" car when it first meets the "B" car
The angularity of this line denotes the velocity of the "A" car
Line on which the paper was cut from the drum
Direction of Paper Travel (Approximately 31" per second)
"A" car moves in this direction relative to the axis of the drums

Fig. 1—The Card Made by the A Car

From the superimposed cards it is possible to determine point 5 at which the draft gears begin to close, the point at which they closed to the maximum amount, point 6 at which they finally part, the distance the cars move along the track during any period of time within the range of the diagram, the time required for any phase of the gear movement cycle, and the amount of draft gear travel at any instant, this being indicated by the vertical distance between the two curves at that instant.

In addition to the instrument with which these diagrams are obtained, the *B* car is also equipped with a small constant-speed motor driven recording drum, the pencil movement of which records the movement of the buffer stem on that car with relation to the car body, by means of an equalized piano wire connection to the top and bottom of the front follower. The card from this drum reflects the smoothness of action of the draft gear in closure and release on a time-closure basis and provides a measure of the maximum closure of the draft gear on the *B* car. In addition to the record thus obtained, which compensates for any tendency of the follower to tilt in a vertical plane, the buffers of both cars are fitted with the closure gage shown in one of the illustrations, from which the maximum gear movement may be measured. These gages are a part of the regular equipment of the test cars as they have previously been used.

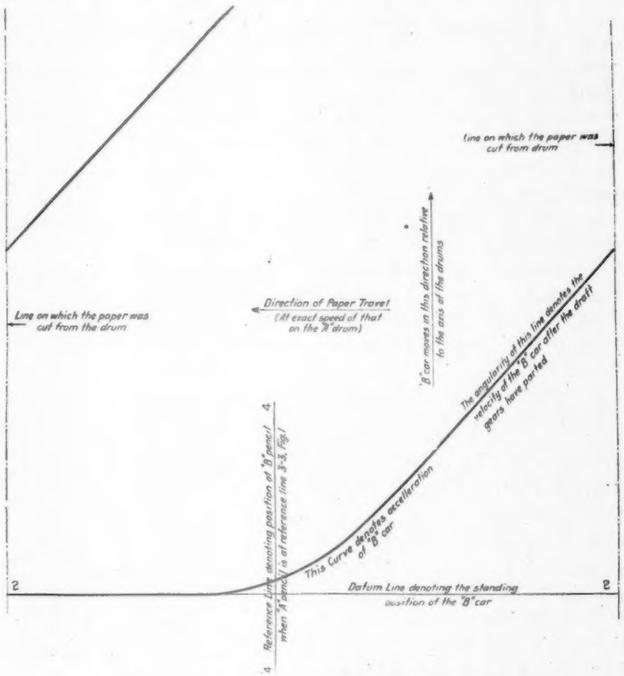

Line on which the paper was cut from drum
Line on which the paper was cut from the drum
Direction of Paper Travel (At exact speed of that on the "A" drum)
"B" car moves in this direction relative to the axis of the drums
The angularity of this line denotes the velocity of the "B" car after the draft gears have parted
This Curve denotes acceleration of "B" car
Reference Line denoting position of "B" pencil when "A" pencil is at reference line 3-3, Fig.
Datum Line denoting the standing position of the "B" car

Fig. 2—The Card Made by the B Car

To the side of each car are also attached two pendulum shift gages or seismographs. The pendulums of these instruments are arranged to swing freely in but one direction from the perpendicular, the two instruments on the same car being arranged so that the pendulums swing in the opposite directions. The swing of the pendulums under the action of inertia carries with it a small marker mounted on a graduated segment, a friction spring in the marker causing it to remain in the position to which it is moved by the swing of the pendulum. These instruments are a part of the regular test equipment of the cars and the records obtained from them

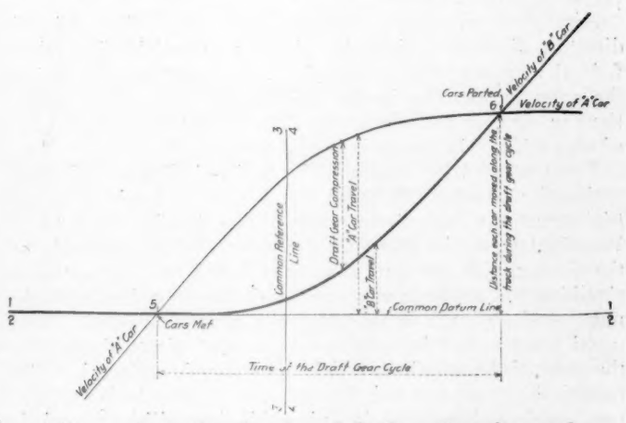

Velocity of "B" Car
Cars Parted
Velocity of "A" Car
Common Reference Line
Draft Gear Compression
"A" Car Travel
"B" Car Travel
Distance each car moved along the track during the draft gear cycle
Common Datum Line
Cars Met
Velocity of "A" Car
Time of the Draft Gear Cycle

Fig. 3—Cards for the A and B Cars Superimposed

provide a means of comparison of the load shifting tendencies of the impact with various draft gears.

The demonstrations were entirely unofficial in character, no records or detail comparisons of commercial gears being taken. The curves here reproduced were obtained with M. C. B. spring draft gears in both cars.

Orders of Regional Directors

DERAILMENTS AND GASOLINE FIRES. The regional director, Eastern Region, by circular 602-31A701, calls to the attention of trainmasters and trainmen a recent bulletin issued by the Bureau of Explosives (Bulletin 176), setting forth the dangers incident to the presence of gasoline tank cars in freight trains, when cars are derailed, and pointing out the precautions which should be observed in such cases.

Agitation of Piece-Work Question.—The Southern regional director by Circular 1521-29-6, dated April 22, instructs federal managers not to allow the question of hour-rates versus piece work to be reopened. In this circular, he says:

"Referring to my telegram of January 2, regarding preference of shopmen throughout the country to be paid on hourly basis: Acting under the permission of the director general, of December 31, 1918, employees on many railroads have indicated their preference with respect to working upon an hourly instead of a piece work basis. Director Tyler, Division of Operation, Washington, writes me he is advised that at some shops, after a decision has been reached in this way, certain local officers or foremen are continuing to agitate the matter, urging upon the men that another vote be taken, with the result that in some cases two or three votes have already been taken upon the subject.

"This is taken as indicating a purpose on the part of these local officers to circumvent the wishes of the director general, so clearly expressed in his telegram of December 31. The effect is to keep the shop organizations at such points continually agitated with most certain detrimental effect upon the efficiency and morale of the organization.

"Will you please direct that, on railroads under your jurisdiction, where employees have once decided this matter by vote, it will be considered as definitely settled during the period of federal control."

Sanitary Maintenance of Cars, Shops, Etc.—The regional director, Eastern region, by circular 500-97A705 advises federal managers that a committee is at work standardizing the rules for practice in the maintenance of sanitary conditions in cars, shops, offices, etc. The committee wants copies of all such regulations now in effect.

Payment of War Taxes.—The regional director, Eastern region, by circular 2002-16A707, advises federal managers of instructions from the director of the division of finance, Washington, to the effect that payment by the railroads to the Treasury Department of taxes collected on transportation should not be made in any one month for more than a single month, where such double payment can be avoided. The usual practice has been to make payment ninety days after the close of the month in which the money is collected. The commissioner of internal revenue now desires to have payment made within thirty days; but this time will be extended, on request, where it is impracticable to file the statement within thirty days.

Refrigerator Car Distribution.—The Northwestern regional director in Freight Car Distribution Notice 11 refers to complaints of the misuse of refrigerator cars belonging to packers and directs that instructions be adhered to.

Express Agents' Telegrams.—Circular 205, canceling Circular 158, of the Southwestern regional director similar to Circular 304-11A693 of the Eastern regional director. (*Railway Age,* April 25, page 1046).

Shipping Day Plan.—Circular 79 of the Northwestern regional director authorizes agents to accept less than carload freight on any week day except holidays and regardless of any instructions heretofore issued as to routing.

Passes for Brotherhood Chairman.—Supplement 27 to Circular 29 of the Central Western regional director, similar to Circular 2100-13A689 of the Eastern regional director. (*Railway Age,* April 25, page 1046).

Prohibition of Smoking in Mail Storage Cars.—Supplement 15 to Circular 120 of the Central Western regional director, similar to Order 174 of the Southwestern regional director. (*Railway Age,* March 21, page 758.)

Violations of Inspection and Safety Appliance Laws.—The Central Western regional director in a letter dated April 19, states that, from the large number of reports which are being made by Interstate Commerce Commission Inspectors to the assistant director of the Division of Operation covering violations of federal inspection and safety appliance laws, it is evident that either the railroad inspectors are not adequately educated or they are careless. A systematic method of handling this matter is advised. Division master mechanics should keep a check upon whether or not the work reported by engineers is being done, and see that reports of violations of rules are followed by suitable discipline. Records should be kept of the violations at each terminal and of the employees responsible in each case.

Preparation of Box Cars for Grain.—The Central Western regional director in a letter dated April 17 calls for immediate attention to the preparation of box cars for grain, and the providing of well-adapted temporary grain doors where needed.

Loss of Coal in Transit.—The Central Western regional director in a letter dated April 14, reports complaints of loss of coal from open cars while in transit occasioned by train and yard employees throwing it off for the use of switchmen, crossing watchmen and others. Coal losses from this source must be reduced to a minimum.

Furnishing Secondhand Rail to Industries and Dealers.—Supplement 8 to Circular 33 of the Northwestern regional director states that hereafter it will not be necessary to secure authority of the regional director's office for the sale of secondhand rail to industries and dealers.

Statistics for Census.—The regional director, Eastern Region, by circular 1801-118A703, informs federal managers that all inquiries presented by the Census Bureau must be answered, the census law requiring all persons to answer inquiries propounded by the Bureau.

Agreements with Brotherhoods Concerning Safety Measures.—The Eastern regional director, by circular 1201-16A708, advises federal managers of the agreement made with the brotherhoods when they promised to refrain from presenting bills to state legislatures. Switch lights are to be maintained on all derail switches in tracks where trains are moved at night. Pusher engines must not push cabooses, except where the caboose has no platform or has steel center sills running through the length of the caboose and platform. Long back-up movements must not be made; if such movements are necessary as a regular thing, provision must be made for turning the engine, or to put pilots and headlights on rear ends.

Contracts Must Terminate with Federal Control.—The Eastern regional director, by circular 304A709 calls attention to the order of April 11, stipulating that all contracts for materials and supplies must be made to terminate at the end of federal control, if they do not by their terms terminate sooner.

Better Packing and Marking.—The regional director,

Eastern region, by circular 600-159A710, advises federal managers of investigations which have been made to improve the efficiency of receiving clerks at freight houses. F. W. Smith, member of the Official Classification Committee, has visited and instructed the men at 257 freight stations. He had intelligent attention from the 6,897 employees to whom he talked, but many of them were found very poorly informed as to the rules for receiving freight. Intensive loading of way cars has resulted in some damage to freight. At some freight stations, receipts have been given, during the closing hour of the day, by men who have not seen the packages for which they signed. Railroads are found supplying shippers with tags (for merchandise) which would not meet their own tariff requirements, being made of a poor quality of wood pulp. Waybill clerks working on the piece work basis are found to leave off part of the classification description, and this may result in making the rate too low.

Cartmen's Custom House Bonds.—The regional director, Eastern Region, by circular 600-68A699, informs federal managers that the director general, acting on behalf of all federal railroads, has executed, for the benefit of the Treasury Department, a blanket bond, such as is required by the custom house authorities, covering the liability of these railroads as carters and lighterers. Individual railroads, which perform cartage or lighterage service, and which have executed bonds to the government, need not renew such bonds.

Development and Death of the "Sailing Day" Plan

Shippers' Fight Against the New Method of Handling l. c. l. Freight Is Successful

THE "SAILING DAY" plan is dead. Despite masses of figures, statistical reports and thousands of actual service cases marshalled in its support the plan for forwarding package freight less frequently than once a day, instituted just before the taking over of the railroads by the Government and supported by the Railroad Administration died on April 8, after having been viciously assailed for many weeks by shippers and their organizations in various parts of the country. A distinct innovation in operating methods, it lived but a short time before becoming merely an incident in the most turbulent period of railroad history. Its demise may be said to be due indirectly to the termination of the war; or, more directly, the reluctance of shippers to accept any service other than the very best. The complaints of the shippers were voiced unmistakably in resolutions passed by the National Industrial Traffic League at its spring meeting held in New Orleans, La., on March 11 and 12. These resolutions declare that the plan is a restriction upon commerce, that the carriers fail in their legal obligations of receiving and forwarding freight with all reasonable despatch; that this failure is a hardship on receivers of freight, lays a heavy burden of extra expense on the shipping public and causes undue discrimination between markets.

The discussion on these resolutions brought out the fact that the shippers believe there has been a lack of uniformity in the application of the plan. The most definite objections were based on the refusal of carriers to accept freight on other than the sailing days. In some of the larger cities shippers were permitted to deliver freight to the freight houses daily. But, whatever the detail reasons, the points raised in this discussion really explain the main reasons for the downfall of the sailing-day plan.

It was at Philadelphia, Pa., on September 4, 1917, that the sailing-day plan was inaugurated. Its apparent advantages, the condition of traffic at that time and the willingness of shippers to accept anything that promised better service made the first few months of the new system a success; and about March 1, 1918, the plan was extended to all of the Pennsylvania Railroad lines east of Pittsburgh and Erie, with the result that before long the records showed that 654 cars were being saved in this territory daily, and that 25 distributing freight trains were found unnecessary and were discontinued. By this time the new plan had reached a stage where it was possible to make definite claims concerning its superiority and shippers were told that by supporting it they would economize car space, would enjoy more regular service, reduce the time in transit, lessen the number of loss and damage claims because of the elimination of rehandling at transfer stations and lessen the amount of freight going astray. Immediately following the extension of these economies over the Pennsylvania system the Car Service Section of the Railroad Administration threw its support behind the plan and it was quickly extended to all portions of the country.

But it was not long before clouds began to appear, and even before the Car Service Section gave its approval to the plan trouble was encountered at Philadelphia, at New York, in Massachusetts and in Rhode Island with the schedules first prepared. The plan, however, was not actually assailed until after the termination of hostilities on November 11, when the necessity for stringent economies in cars and service being ended, the shipper felt that he could express the objections, theretofore voluntarily repressed because of his desire not to do anything which might embarrass our government in its efforts to win the war. The first criticisms came from the smaller jobbing points. Smaller Iowa points first raised the cry which later was taken up by Missouri, Kansas, Nebraska and other central western states, terminating finally in the resolution passed by the National Industrial Traffic League representing the traffic interests of the entire country. The direct result of this resolution was the formation of a committee composed of National Industrial Traffic League members to lay the shippers' objections before the Railroad Administration and request the amendment or discontinuance of the plan. This was done at a meeting arranged by Max Thelen, director of the Division of Public Service which brought together traffic and operating men of the Railroad Administration, representatives of the shippers and state commissioners. The Railroad Administration at once acquiesced in the principles laid down by the objectors, a rather unexpected outcome in view of the steady backing that the plan had received from the Railroad Administration. The regional directors soon were ordered to accept less than carload freight on any week day except holidays, and regardless of any instructions previously issued as to routing. In other words, this order was the obituary of the sailing-day plan and the old sailing-day orders were made virtually inoperative. The action thus taken was epitomized in the formal announcement of the director general given in the *Railway Age* of April 11, page 942, which also virtually abolished the scheme for consolidating freight for a given destination over one of two or more competing lines.

Preferred routes were to be maintained only as they were accepted by patrons as "convenient." The proposal was for a "modification" of the plan; but with shippers' wishes so completely in the ascendant that the modification really meant abolition.

And so the sailing day, advocated as a war measure by the Railroad Administration, passed out of existence, a victim of the ill will of shippers and shipping organizations. It was natural that the first objections should come from the smaller jobbing centers. They complained of failure to receive and forward freight with reasonable despatch. Ordinarily this was as true of the larger cities as of the smaller. Legally, carriers must accept freight whenever it is offered during business hours and must transport it with all reasonable despatch. Obviously, the skipping of days to save cars often violated this legal obligation. The second point was that the sailing-day plan laid a heavy burden of extra expense on the shipping public. At the larger terminals where the tonnage is heavy this was not true, for the shipper was enabled by the fact of his heavy tonnage to deliver his freight to the roads on any day. But the jobber in the smaller town with only two or three sailing days in a week was compelled to store his freight on his own premises until the railroad was ready to receive it. But the small town jobber played his trump card in this third point; he said that the operation of this plan caused undue discrimination between markets. For example, competing shippers are located in Kansas City, Mo., and Atchison, Kan. Their products are substantially the same, their selling forces equal and their advertising equal; in short, they are typical rival companies. Yet when the sailing-day plan entered it gave an advantage to the jobber situated in the larger city, for he could ship freight on practically every day, whereas the shipper located in the smaller city was restricted in his shipping to the same point to two or three days of the week. The purchasers of the commodities produced by these companies, being in the main dealers in the smaller towns who as a rule do not place their orders for further stocks until the goods are actually needed, required the shipping of their orders with the least possible delay. The salesman of the Kansas City company could say definitely that the goods would be shipped immediately; the Atchison salesman usually would not dare to promise shipment in less than two or three days.

The discussion which followed the presentation of the resolutions before the National Industrial Traffic League brought out the interesting fact that the sailing-day plan had not been uniformly applied in the various sections of the country. For instance, in the east and northeast the objections to the plan were much less vigorous than those registered by shippers in the middle west, due probably to the careful manner in which schedules were arranged by the Eastern roads in order to avoid discrimination between markets. But on one objection shippers from all parts of the country seemed to agree, that against the carriers' refusal to accept freight, on other than the sailing days; although at some of the larger cities shippers were permitted to deliver freight to the freight houses daily.

These are the arguments presented by the shippers; the other side, the railroad men's side, has been backed by the compilation of important car savings effected, better service rendered and large expense saved. Certainly it is true that the sailing-day plan conserves cars. Undoubtedly the operation of the plan in the congestion so generally prevalent last year gave the shippers more regular and dependable service than would otherwise have been possible; but the question arises whether the shipper really wants a regular and dependable service or prefers an apparently better service with its faults and weaknesses concealed. In defense of the objections which arose in the central west against the sailing-day plan railroad officers claim that many of these objections were made before the schedules had been properly arranged and revised to meet conditions of which their authors did not know when the schedules were prepared. In other words, railroad men believe that the shippers kicked against the sailing-day plan before it had been given a fair trial, and before the relations between the larger terminals and the smaller jobbing points could be satisfactorily adjusted to the individual needs of shippers. In many situations the sailing-day plan is the only really effective means of handling less than carload freight with true and mutual economy.

The Facts in the Zone Rate Postage Controversy

In a public and official statement given to the press on April 26, attacking the publishers, Postmaster General Burleson named Charles Johnson Post, director of the Publishers' Advisory Board, as the chief representative of "selfish publishers" and challenged him "to disclose all moneys raised by him to repeal this legislation (the Postal Zone Law) or in what manner it was spent."

Mr. Post immediately accepted the challenge to make public all the books and funds of his organization and to put himself under examination, under oath, as to the expenditure thereof.

The telegrams of Mr. Post and Mr. Burleson are given herewith:

Post Replies to Burleson's Challenge

On April 26 Mr. Post wired the postmaster general as follows:

"I accept your challenge issued in your official statement published in today's papers, to publicly present all figures of moneys raised by the Publishers' Advisory Board, its expenditures and all details in connection with myself and this organization, before any representatives named by you and at any time or place at their convenience. I shall place myself entirely at their disposition as to examination under oath in connection with all these expenditures.

"In return I challenge you to similarly produce and make public your record of the moneys received by you and the profits made by you in connection with convict-labor on properties owned by you, a convict-labor system which competes with free American labor and in which whippings, brutality and ferocious punishments were the methods of extracting adequate labor from its victims.

Burleson's Reply, Evading Acceptance

On the same date the postmaster general replied to Mr. Post thus:

"Answering your wire, the full facts in connection with the lease to the state of Texas of the plantation in which I was interested, upon which the state used its convict labor, and the terms of the contract in connection therewith have been placed before the Congress more than once and have long been a matter of public record.

"It would be quite interesting for you to publish now and later have laid before Congress the facts in the same detail about moneys raised and spent to secure the repeal of the zone postage rate law. Of course you know, as the New York World did when it published this falsehood, that I did not use convict labor on my plantation, but that the plantation was leased and cultivated by the state of Texas and the

convicts used thereon were at all times under the state's exclusive control and management."

Post's Second Telegram to Burleson

Mr. Post replied to the above telegram on April 28 as follows:

"In reply to my prompt acceptance of your challenge you apparently seek to avoid any of the consequences of your challenge, for you clearly evade the issue in your simple, abstract and mild reference to it when you say: 'it would be interesting for you to publish now and later have laid before Congress the facts in detail about moneys raised and spent to secure the repeal of the zone postage rate law.'

"I met your previous challenge promptly and unequivocally; I accepted your challenge to produce publicly all records of moneys subscribed to this Publishers' Advisory Board and to submit myself, under oath, to examination as to all expenditures thereof before any body of representatives to be named by you as I stated to you in my telegram. I call upon you as a matter of good faith to the public to whom you appealed to come through on your own challenge—which I have absolutely and unqualifiedly accepted—or to stand repentantly self-confessed as a quitter along that line of sinister and disreputable suggestion.

"I, in return, challenged you to similarly produce to the public your record of moneys and profits received by you in connection with the abominable convict-labor system with its floggings to extract more work. In reply you admit that you have received moneys in connection with that convict-labor system, and in your own defense you merely plead that you, personally, were not directly in contact with the operation itself, but that your plantation was 'leased and cultivated by the state of Texas.'

"The public will thoroughly appreciate the unique qualities of such defense. It is as though a landlord were caught owning a house used for immoral purposes and immediately pleaded his own probity on the ground that he merely leased the premises, receiving the profits therefrom, but took no personal part in the orgies. Your defense—which is, I believe, what lawyers call a 'plea of confession and avoidance'—may well be left to the scrutiny of the American public.

"In your published official statement you continually endeavor to hide behind Woodrow Wilson's back and to make it appear that it is the enemies of the Administration who attack and martyrize you. Let me say in passing that behind Woodrow Wilson's back is pre-eminently the symbolic place for you; for it is you and your chief support in Congress that have been the Trojan horse of the Administration, hacking and ham-stringing the very principles and party you profess to serve.

"It is not the enemies of the Administration who effectively denounce you—it is your own record of postal incapacity and postal demoralization; it is your autocracy and Prussianized methods; your unswerving, imperialistic contempt and lack of understanding of what the ideals and hopes and rights of America today represent that make you out of harmony with the public and the functions you are supposed to serve. Among those is your contemptuous overturn of the sound postal principles established by President Lincoln that the postal service is an educational and social function of vast benefit to our entire nation and that equal postage to all Americans everywhere within our nation is a basic postal principle. Your public utterances proclaim that all this means nothing to you. A revenge upon publishers—as you think it is—justifies in your eyes the revival of a discarded and condemned postal system of zones with increasing and unfair postal charges against the homes of this nation merely by reason of their accidental remoteness from any city in which a newspaper or periodical is published."

Joint Engineering Meeting in Chicago

REPRESENTATIVES of approximately 75 engineering associations of the United States, representing an aggregate membership of 100,000 engineers, met in Chicago on April 23 to 25, inclusive, to consider the proposal to advocate the creation of a Department of Public Works. The meeting was called by Engineering Council and was presided over by M. O. Leighton, chairman of the National Service Committee of Engineering Council.

Among the question considered were (1) the federal bureaus or activities which should be included in such a department; (2) the advisability of endeavoring to secure an additional cabinet office or to make over one of the present departments by the redistribution of activities, and (3) the advisability of directing present efforts toward the complete reorganization of engineering bureaus or merely to bring these bureaus under a single head so that such a rearrangement may be made later as experience may show to be desirable.

After extended discussion extending for the greater part of three days, the consensus of opinion was incorporated in resolutions advocating, (1) the establishment of a National Department of Public Works by grouping those government bureaus, services, commissions and other activities whose functions are predominately of an engineering or architectural character in what is now the Department of the Interior and designating that department "The Department of Public Works"; (2) the transfer of any bureau, service or commission from any other department to the Department of Public Works should be accomplished without a change in personnel, compensation and general plan of organization, leaving the co-ordination of the several activities, and the establishment of additional bureaus to be effected as their need may become apparent from time to time; (3) in transferring river and harbor work and other work non-military in character but now in charge of the engineering corps of the United States Army, to a Department of Public Works, the relation of the army engineers to such work should not be changed so that there should be no relinquishment of non-military duty by the army engineers now on such duty, until such transfer of these engineers to military duty may be made without detriment to the public interest.

The conference decided that among the various activities which logically belong in a Department of Public Works were a Bureau of Public Roads; the United States Reclamation Service; the Alaskan Engineering Commission; the Construction Division of the United States Army; a Bureau of River, Harbor and Canal Work, including such functions as are now exercised by the Mississippi River Commission and the California Debris Commission; a Bureau of Architecture; a Bureau of Surveys, including the Coast and Geodetic Survey; a Bureau of Mines; the Geological Survey; the Forest Service (at least until it is divorced from the supervision of water powers and road building), and the Bureau of Standards.

It was believed that it would be unwise to determine at this time the extent to which the proposed Department of Public Works should control the engineering activities of the General Land Office, the National Park Service, the bureaus of Lighthouses and Indian affairs, and the Public Health Service, and of various commissions, such as those on buildings and grounds, and suggested that such questions be deferred for later consideration, preferably after the department had been organized. Three permanent committees were formed—(1) an executive committe, (2) a committee to draft the bill providing for the creation of a Department of Public Works, and (3) a committee to conduct the campaign for the passage of this bill. M. O. Leighton was made chairman of all three of these committees.

The session on Thursday morning was devoted to the dis-

cussion of the creation of a Department of Transportation. Several speakers advocated such a department to take over the duties assigned to the Interstate Commerce Commission before the government took over the railroads, these same speakers advocating the handling of railway engineering and construction work through the proposed Department of Public Works. However, the conference passed no resolutions in this matter relative to the proposed Department of Transportation.

Engineering Council and Other Societies

The concluding session of the conference on Friday afternoon was devoted to the consideration of the relation which Engineering Council should bear to national, state and local societies on matters concerning the council. In opening this discussion, J. Parke Channing, chairman of Engineering Council, outlined its development as a joint organization of the four national societies of civil, mechanical, electrical and mining engineers with which the American Society for Testing Materials has since become affiliated. Engineering Council handles problems of common interest to engineers and, only three years old, has made marked progress in developing its activities in spite of the handicaps of limited finances and war-time conditions. Among the accomplishments outlined by Mr. Channing are the creation of an employment bureau for engineers, the establishment of a National Service Committee at Washington and the creation of a war committee of technical societies in co-operation with the Naval Consulting Board. Committees of Engineering Council are also studying the problems of Americanization, the classification of compensation of engineers, curricula of engineering schools, the international affiliation of engineers, the licensing or registration of engineers, the patent situation and public affairs.

During the discussion need was expressed for more aggressive action on the part of the council to promote the business interests of the profession. The meeting adjourned without the adoption of any resolutions or the expression of opinion.

Harmony and Safety*

By T. J. O'Kelly
Brakeman, Atchison, Topeka and Santa Fe

WHEN I went to railroading I was only a boy. I wrote to my relatives in Missouri and told them of my new job. My brother and sister wrote and begged me to quit as it was so dangerous. I did not heed the advice. In less than a year my brother had his eye shot out by a blast and my brother-in-law had let his team run away and his ankle was broken, which made him a cripple for life. I wrote and told them they ought to quit farming as it was too dangerous. My observation is that a man's work is safe or dangerous just to the extent he makes it so. * * *

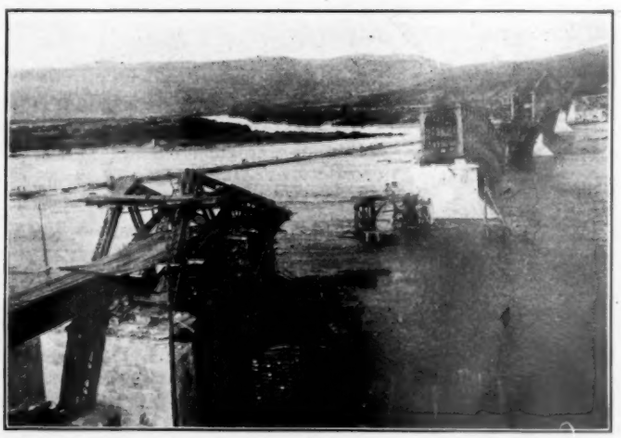
A man working on the railroad has more to make him optimistic and happy than in any other occupation on earth. There is more to remind a railroad man of the good than in any other occupation. Every telegraph pole should remind him of the cross on which the Great Teacher was crucified because He taught the Truth. What is more sublime than to look along a freight train as she rounds a sharp curve going down a grade and think of that entire train being under the control of one man, the engineer, and *that* only by action of his mind, and all he uses to control it is the very air we are breathing. Think of the possibilities when we know all the truth about the wonderful earth and her resources.

The engineman who is happy at his work is the most successful. * * * So with conductors. With some conductors you can be sure that when the caller comes trouble begins. If the caller is five minutes ahead of time he gets bawled out, and if he is five minutes late he gets a cussing. The conductor gets on the caboose with a grouch, knows he is going to have a bad trip even before the train is made up. He catches the caboose and begins to complain to the rear brakeman about the head man, and when he gets to the head end he tells the head man the hind man is no good and everything is against him. He carries three kinds of trouble all the time: That which he had last trip, that which he is going to have this trip, and that which is coming after a while. But the man who is happy in his work is the man who will win.

Harmony among men and officers will make preventable accidents unknown. No train is safe when a brakeman doesn't like the conductor, or vice versa. I have actually known an instance where a brakeman let a conductor pass a meeting point because they were not on good terms. I am sure that most all these unfriendly feelings are the result of misunderstanding. Pardon me for quoting another passage from the old Book. The Great Teacher said: "The truth shall make you free." He also said if our brother had aught against us go first to him and talk it over. We can usually adjust all differences in the first conference, and if we have gone in the spirit of real brotherhood we shall have saved a friend. If it should happen that difference arises that cannot be settled at the time, suppose you say to him, "Now, let us not get mad, but when we get in we will go and ask Mr. Christie (superintendent) about it." I know that Mr. Christie will take both your hands and cement the friendship closer than ever.

A few seconds before nine o'clock each morning, if we are near a telegraph office, we hear the signal for time. If now in this room we were to compare watches we could easily tell who are carrying standard watches. The great master clock in Washington, D. C., is calling for the wire to send time. Everything is hushed, it reminds me of when I was small and father would call all the family together for morning prayers. As that clock beats off the seconds we stand with attentive ears to hear the time signal given. We then announce our differences—but they are not great if we have compared regularly. * * *

*Extract from a paper read at the Arizona division safety committee meeting at Needles, Cal., on February 10.



Photograph by International Film Service Company, Inc., N. Y.

Railroad Bridge, Near Ufa, Russia, Blown Up by the Bolsheviks. This Has Cut the Town Off from the Outside World

What Does It Cost to Stop a Tonnage Train?

A Study of the Value of Interlocking to Keep Traffic Moving at Grade Crossings, Draw Bridges, Etc.

By C. C. Anthony
Santa Rosa, Cal., Formerly Assistant Signal Engineer Pennsylvania Railroad

THE ECONOMY of signaling and interlocking is much more generally recognized now than it was 30 years ago; although the actual returns in dollars and cents are often so hidden among other varying operating factors that it is hard to prove or exhibit them so that they will make much impression. Even at the present day it is likely that many railroad officers view with gentle suspicion the estimates that have been prepared to show the operating economies effected by the installation of signals or interlocking, because of the favorable showing made, and besides there may be little hope that the predicted benefits can be detected after the work is done. Nevertheless, in many cases the benefits are real, however difficult it may be to show beyond question their money value.

The particular case considered here is that of the saving that may be effected by the use of interlocking where such an installation will assist in preventing the stopping of trains. Railroad grade crossings are prominent examples because, in the absence of interlocking, the stopping of trains before crossing is generally required by law. The same condition may exist at other points, such as drawbridges and junctions, depending upon the practice of each road or the laws and commission rulings in the various states. On several occasions in the past attention has been called to this phase of the benefit of interlocking, and some study has been given to the cost of stopping trains, on which the actual financial saving is mainly based.

As long ago as 1887 Wellington devoted a chapter to this subject in his book entitled The Economic Theory of Railway Location (Chapter XXV, edition of 1887). In his discussion Mr. Wellington is moved to strong language, which was undoubtedly justified at the time, and is, perhaps, to no small extent even now. After mentioning the practical absence of grade-crossings in England, he says:

"In America there are a great many grade-crossings, even on important lines; but the clumsy and costly precaution of a full stop of every train at every crossing is still the rule, although it can hardly be that such an absurd relic of barbarism will linger much longer, now that there is a considerable and increasing number of grade-crossings operated without a stop by the aid of interlocking apparatus, and always with perfect safety and success.

"In part, the slow progress in this matter is easily explained. The great loss and delay from grade-crossing stops goes on quietly and silently, sapping the life-blood of the company, as do the consequences of bad location, without interfering much with the routine of operation, and at points removed from the managing officers' immediate observation, whereas the difficulties at yards obtrude themselves on attention, and many of the most crowded yards have passed the limit of their capacity without some such mechanical aid. Nevertheless, from an economical point of view, abolishing the stops at grade-crossings is by far the most important, especially when, as is so frequently the case, they reduce the number of cars hauled below what it otherwise would be."

He rejects "the wild estimates which give the cost of a stop at anywhere from a dollar up," and, without going into details, takes from 30 to 60 cents as fair for the cost of a stop, apart from all effect on length of trains. At 40 cents per stop, which he thinks not excessive for average trains on lines doing considerable through business, the cost per year of each train per day stopping at a crossing, becomes $146. For an average of ten trains per day each way on each of two crossing roads, the total annual loss to both roads is then $5,840. If these figures were reasonably near the truth, it is hardly necessary to go into the details of the cost of a small interlocking plant required at the crossing of two such roads, including the cost of operation, maintenance and depreciation, to be convinced that interlocking would be a profitable investment. Even at present rates and prices, which would greatly increase the interlocking costs, and at the same time increase the cost of stops materially, a good showing would undoubtedly be made.

To what extent the length of trains is affected at the present time by the stops required at non-interlocked crossings, the writer is unable to say. Mr. Wellington, however, asserts that there were many such cases at that time, and points out that the loss due to cutting down the length of train on account of the stops at a crossing, may be much more than that due to the direct cost of the stops themselves. It is evidently assumed that the train-load would be based on no stop at the particular crossing, if interlocking were provided, and that the trains occasionally stopped when the crossing was blocked by trains on the other road, would "double the hill" or be helped away by a yard engine.

In 1905 J. A. Peabody, signal engineer of the Chicago & Northwestern, prepared a paper on the cost of stopping trains, compared with the cost of maintenance, operation and inspection of interlocking plants, which was published in the proceedings of the Railway Signal Association, Vol. I, page 281. Mr. Peabody obtained from two railroad officers estimates of the costs of stopping trains (stopping, starting and accelerating to the speed from which the stops are made). These estimates varied from 35 cents for a six-car passenger train at 45 miles an hour to $1 for an 80-car freight train of 2,000 tons at 35 miles an hour.

Mr. Peabody takes 45 cents as a conservative average cost for all trains and presents calculations of the savings to be effected in nine assumed cases (entrance to a yard, crossings and drawbridges) by eliminating stops through the installation of interlocking. It is assumed that additional men will have to be employed to operate the plants except at the drawbridges, for which calculations are made both with and without additional men. In each case the results for various numbers of trains are given. The annual saving, due to the cost of stopping trains, is equal to the annual charges against the interlockings (interest, depreciation, maintenance and operation) for from 16 to 19 trains per day, except at the drawbridges where no additional men are assumed, in which cases the balance exists for 7 and 8 trains. Except for one example net savings appear when the number of trains is 20 where additional men are assumed, and in the case of drawbridges requiring no additional men, when the number of trains is 10. At the crossings, of course, the number of trains is the total both ways on both roads. In one case, where 25 is the smallest number of trains for which there is any sav-

ing, the cost of the interlocking, and consequently the costs of interest, depreciation and maintenance, are assumed to be increased by the inclusion of two switches and a crossover located so near a crossing that they would have to be interlocked. In cases of this kind, however, although only from one point of view, the interlocking of adjacent switches is purely incidental and an unavoidable burden upon the protection of the crossing, it may still fairly be claimed that the resulting increased cost is more or less fully offset by a gain in safety at least.

In all of these examples, where additional men for operation are assumed, the cost of this item is $1,320 per year. This amount is now much too small, of course; it should apparently be about three times as much under present conditions. On the other hand, it would seem that the entire pay of the levermen would rarely have to be charged up, for presumably in most cases where the traffic would warrant consideration of interlocking, signalmen are already employed, although the stopping of trains cannot be eliminated because approved interlocking has not been provided. Consequently the only thing usually to be considered is any increase of pay that may be necessary if interlocking is installed. No doubt the other items also have increased greatly since the estimates under consideration were made. But as against any increase in the total annual charges due to the interlockings, there must be charged an undoubted increase in the cost of stopping trains, especially in comparison with the average cost assumed, 45 cents, which seems to have been almost needlessly conservative in 1905. In view of the fact that freight trains are slightly more numerous than passenger, it seems that the average cost assumed should be a little greater than that estimated for the latter. At the same time there must have been a considerable increase in the actual costs, due to increases in prices, rates, and weights of trains. In practice, of course, after the costs of stopping average passenger and freight trains are separately calculated or estimated, it would be better to total them for the number of trains of each kind at a given point under consideration, than to use an average for all trains.

The annual charges against a proposed interlocking can be closely estimated, at least on the basis of conditions prevailing at the time. What changes the future may bring forth is, of course, a matter of speculation; although it should be rather immaterial in the long run, since variations due to changes in the general level of prices are likely to be nearly offset by similar variations in the cost of stopping trains. But this latter cost is not so easily determined. And yet it is the principal item in any estimates of benefits to be derived from the installation of interlocking in the cases here considered; in fact, it is about the only one on which attempts have been made to figure savings in dollars and cents, in these cases. For the most part the costs used have been based on pure estimates, or even on guesses—which, in some of the answers to Mr. Peabody's inquiries, ranged from five cents to five dollars. Whether the cost of stopping trains can ever be calculated with reasonable accuracy, even as closely as might be permitted by the use of statistical average amounts or costs for certain items, such as fuel and repairs per car and engine-mile, etc., is questionable. Very likely the best that can be done is to use careful and conservative estimates.

Calculating Cost of Stopping Trains

In this connection it is interesting to refer to an ingenious method of calculating the "approximate cost of stopping a train," presented by "R. E. W." in the *Railway Age* of March 22, 1918, page 708. In this method the energy stored in the train, and dissipated in stopping, is calculated—taking a train of given weight moving at the speed from which the stop is assumed to be made. The amount is divided by the work required to move the train a mile at the original speed. The quotient, "equivalent miles run," "will represent the distance the train would have traveled due to its stored-up energy." The assumption is that "this quotient multiplied by the cost of coal, repairs and wages per train-mile, will give the total cost of the stop."

As worked out by this method the cost of stopping an eight-car passenger train weighing 623 tons, from a speed of 30 miles an hour, is 61.4 cents; and for a 50-car freight train weighing 3,943 tons, at the same speed, is 175.3 cents. In these examples wages of the train crews are not included, as they seem not to be a factor unless overtime is involved. So, too, certain neglibly small items are omitted. This method is attractive in that it is definite—free from estimates, and makes use of available, experimental and statistical data. If, for a given situation, an average passenger train, an average freight, and average speeds are taken, then for each kind of train the stored energy is obtained from the speed and weight of the train; the work required to move the train at the original speed is calculated from accepted values of train-resistance; and the cost of running the "equivalent miles" is determined from the average cost of fuel and repairs per car and engine-mile, as given in the road's reports. This cost, being for an average train and based on average costs per mile, should be fairly accurate. But is it the cost of the stop?

Apparently the principal items in the cost of stopping (and starting and accelerating) a train are: Extra wear and tear due to stopping and starting (wear of brake shoes, tires and wheel treads, and various other parts), represented by some addition to the average cost of car and engine repairs. Cost of extra fuel chargeable to the air compressor when replacing the air used in braking. In one set of estimates cited by Mr. Peabody this item was based upon tests, and amounted to about ten per cent of the total coal estimated. Cost of fuel used in starting and accelerating the train less the cost of fuel required to move the train, at its original speed, between the point where reduction of speed for the stop begins and the point where the original speed is regained.

Unfortunately it is not clear that the cost obtained by the method briefly described above has any necessary relation to the total of the items just enumerated. It might prove to be about equal if the amounts of these items could be found with reasonable accuracy. But it does not seem evident, on the face of things, that it would. As stated before, then, it may be necessary to depend upon careful and conservative estimates; although test runs with and without stops, over the distance covered by the stop and acceleration, should supply fairly accurate data of the extra fuel used for the air compressor and the acceleration together. One such test is reported by Mr. Peabody, and very likely others have been made.

Cost of Stops Affected by the Delay of Other Trains

Impossible as it may be to determine the cost of stops with certainty, and difficult as it may be to see in the operating results the saving effected by eliminating certain stops, nevertheless this saving is real money. In addition to such direct financial saving there is the elimination of damage in starting heavy freight trains, and the general improvement in train movement due to cutting out the stopping of all trains at a certain point. The cost of the damage to trains may be included in the cost of the stops, but, even if it is, the indirect and sometimes quite far-reaching effects in the way of accumulating delay, both to the damaged and to other trains, may mean a considerable loss in the course of a year. So, too, with the general improvement in train movement. It is not merely a matter of saving so many minutes per train, lost in the stops. The few minutes lost by a freight train in stop-

ping at a crossing may mean a bad combination in meets and passes on all the rest of the run, resulting in many times the original delay before the terminal is reached; and other trains may suffer at the same time. If it is not always, or often, possible to show the money loss from such derangements of the movement, the elimination of one cause of them means, as everyone knows, real benefit thrown in for good measure above more definite money savings.

Although there is no quick and easy way of showing beyond dispute just what saving will result from eliminating stops of trains by installing interlocking in a given case, the result can, with proper conservatism, be estimated convincingly. As interlocking costs and the cost of stopping trains have both risen, though probably not in just the same proportion, it is safe to say that the relation, as estimated years ago, is not now very far wrong, or at any rate is not too favorable to interlocking for general purposes.

A Financier on the Railroad Problem*

By Charles E. Mitchell
President, National City Company, New York

THE TIME HAS COME to solve the problem of the future for the railroads, and the longer the delay the more difficult the solution. The administration has suggested that government operation continue for a further period of five years, in order that it may be more thoroughly tested. This suggestion has met with marked opposition and apparently it has been dropped by its original advocates. While it is in the power of the administration to turn the railroads back at any time and immediate return has been threatened, assurances have been recently given that the railroads will not be returned in a way to bring disaster, which surely means that they cannot be abruptly returned. To fix a date, even that date provided in the law, namely twenty-one months after the declaration of the ratifications of the treaty of peace, as the date when the roads shall be returned, would seem the height of folly. The railroads should be, and probably will be, returned when a sane and sound plan for their return has been devised.

Suggestions for the return and subsequent method of operation and regulation have been many. Plans have been submitted by the railway executives, by the Associate of Railway Security Owners, by the Interstate Commerce Commission and the director general himself. Railroad presidents and bankers have expressed their views and the railroad brotherhoods have produced for consideration a most socialistic suggestion. Many of the views expressed in these plans are admirable, though for the most part, they involve the laying of the railroad structure upon the operating table and performing upon it major surgical operations that will result in making it little resemble that transportation system which has served so well our public in the past. They propose such physical and financial readjustments of the railroad situation as, in my opinion, would leave the patient weak and disfigured and unable to bear the burdens which American commerce must throw upon him without interruption.

Most of the plans provide for guaranteed minimum profits to the roads and a maximum profit return. I am personally opposed to the minimum guaranty suggestion, for I believe it to be a definite step toward government ownership, especially if private management fails to earn the income guaranteed. I believe it will take from private initiative a fear of failure, which is, in itself, a spur to achievement. I do believe, however, in a fair division of profits above a specified maximum, but I cannot believe in fixing a point in profits above which all excess goes to others than the railroads. Rate making in itself must be largely determined by the expense of operation, not of one road but of all roads involved in the specific rate made. If operating on such a rate, the poorly located or poorly managed road is to be given a chance to live, the well located and highly efficiently operated road will find such rate extravagantly profitable. Such excessive profits should, I believe, be divided with the government and others as in the judgment of our Congress seems proper, but the spur to achievement in operation that results in high profits should never be taken away by placing a fixed maximum return on any road. In many of the plans suggested, an attempt is made to arrive at a method—a precise formula, as it were—for the establishment of equitable rates, and some definitely suggest a regional combination of roads. I cannot believe that this is the time to attempt to figure out theoretically a rate formula or what combinations of roads should in the ultimate be made. Given a properly constituted Interstate Commerce Commission of truly representative men with authority for the development of rates, as a result of a study, experimentation and adaptation, combined with legally delegated responsibility to see that such rates be commensurate with operating expenses, a federal commission having jurisdiction over intrastate as well as interstate commerce so far as the laws permit, but in any event working with greater harmony than heretofore with various states, through, perhaps, regional advisory boards, composed of State representatives, of shippers and of labor—then I feel that we have gone as far as we can along the lines of rate fixing.

Perhaps the thought that I would contribute to the discussion leading to the solution of the railroad problem may be of interest. It is based upon the conclusion that government ownership and operation is not practical; that private ownership and operation, freed from government regulation, has been shown by history to have its dangers and is not feasible; and that the situation must be worked out under private ownership and operation under fair and equitable regulation, the solution to be found with as little disturbance as possible of structures already existent.

Three things appear to me essential to be done before consideration is given to the return of railroad property to private operation: first, the reconstruction of the Interstate Commerce Commission, with rate-fixing authority and responsibility definitely established; second, an immediate rate increase sufficient to take up the burden of the wage increase granted during government operation; and third, the passage of such legislation as will provide for a division of profits above what shall be determined to be a reasonable return to invested capital. With these things accomplished, we should be ready for private operation. That complete severance from government responsibility for railroad credit should be immediate and for every road at the same hour, seems to me, however, a preposterous suggestion. The corner to be turned must not be a sharp one. The return must be gradual, both in method and point of time. I feel that the government should continue its guaranty of standard rental return as now established for such a period, probably two to three years, as will enable private managements to get back a firm hold upon their affairs. Under such continuance of guaranteed return, let the government turn back the properties with reasonable working assets to the private owners, leaving for gradual settlement and adjustment the counter claims inevitably to be made as between the government and the private owners for later but as early an adjustment as may be possible. Let private management reinstate itself, with the requirement upon each road to pay over to the government any excess over the government guaranteed rental return and with the right to call upon the government during the guaranty period for any deficit between its net operating revenue and such guaranteed rental. But let there be pro-

*From an address delivered before the Canadian Club, Montreal, Canada, on April 21, 1919.

vision that at any time during this two to three-year period of continued government guaranty, any railroad company may, if it so elect, release the government from its guaranty and receive thereafter the full net return resulting from its operations, subject to a division of excessive earnings as heretofore suggested. I am of the belief that, under this plan, the owners of the majority of our large railroad companies would release the government from its guaranty within the first year, and that the roads continuing to work under the guaranty to the end of the period, which would naturally be the weakest of the companies, would be comparatively few. The financial condition of such remaining companies will doubtless be such that drastic reorganizations will be necessary at such time as the government guaranty ceases, and I would consider it more than likely that at such time the government would deem it wise to give its permission, present laws to the contrary notwithstanding, for absorption and consolidation of such roads in the stronger systems. Thus, would the roads return to private management under the same incentive to the development of efficient competitive service that has made the railroad system of the United States the model of the world. I recognize that this plan of adjustment involves many complexities which will demand co-operative effort and well considered legislation to solve, but I do feel that the plan subjects the problem to comparatively simple and effective treatment.

The railroad problem is only one of our great problems of the adjustment period through which we are now passing, but it is entwined with practically every other problem of the day—the problem of labor, of inflation, merchant marine, and even the problem of our export trade—for, as you know, the railroad item enters into the cost of goods delivered at seaboard for export to a greater extent than in any other country, with the possible exception of your own. It would be interesting indeed, were there time, to trace the windings of the knot which entwines other adjustment problems with this great railroad problem. The minds of American business men, however, are distinctly upon these many problems, and in that thought alone we may be optimistic that they will be solved aright.

Conditions in our country are, on the whole, exceptionally good. A uniformity of conditions and a uniformity of thinking, throughout the length and the breadth of the land, exists as I have never before seen it. Wages are everywhere high, and there is no marked degree of unemployment anywhere. Bolshevism is being trampled down wherever it shows its head. Merchants are doing a large and profitable business. Our Victory Loan campaign gives promise of being a huge success. By and large, the fundamental conditions in the United States are sound. We have, to be sure, many questions for which we have yet to find the answer, and not the least of these is as to where we are to find a market for our goods. The development from a debtor to a creditor nation has brought its difficulties, as well as its responsibilities, and among those difficulties is the sharp advance in dollar exchange, which impedes the opening of foreign markets for our exports. The maze of the railroad situation would seem to preclude the possibility of the railroads becoming active purchasers in volume immediately, and as I have suggested before, the rate of railroad buying is usually a barometer of the prosperity of the times. On the other hand, agricultural conditions are so abnormally good with us that we hope the farming communities will enter our markets as exceptionally heavy buyers. Winter wheat was reported, on April 1, as in practically 100 per cent perfect condition, comparing with 78.6 per cent a year ago and a ten-year average of 82.3 per cent. The ground condition is everywhere good, and a bumper year is expected. All things considered, the favorable conditions would appear to at least offset the unfavorable conditions with which we are confronted, and, while I will not predict a year of tremendous commercial activity, as compared with the years of the war, nevertheless, I feel that a year of at least moderate prosperity is assured.

One thing is certain—the immense wealth of the United States today and its unprecedentedly strong position as a creditor nation not only makes favorable the conditions for, but enforces the seeking of, foreign investments. In that way only, in my opinion, can inequalities of exchange such as exist between Canada and the United States today, be overcome, and I am satisfied that our people are only awaiting the opportunity to invest their capital on this side of the border. We hope to be of assistance to you in your development and of assistance to our own nation in the development of its commerce by bringing American dollars to your land for investment and thus adjusting the rate of exchange, to the end that there may be a free and easy movement across that imaginary line which separates commercially and politically your people and mine, who, after all, are one in blood, in method of thought and in purpose.

Photograph by International Film Service Company, Inc., N. Y.

Railroad Yards at Coblenz, Where Many German Locomotives Have Been Surrendered to the American Engineers

Doings of the United States Railroad Administration

Offer of Industrial Board to Bring Together Administration and Steel Producers Is Accepted

WASHINGTON, D. C.

ANOTHER EFFORT TO SETTLE the controversy over steel prices is to be made by calling the steel producers to Washington for a conference with the representatives of the Railroad Administration. Director General Hines telegraphed from Denver on April 28 accepting an offer made by the Industrial Board which had tendered its services to bring together the representatives of the Railroad Administration and the steel producers. It was stated that the board would "render all the mutual aid possible to bring about a satisfactory understanding between the Railroad Administration and the producers of steel, on the broad basis of the maintenance of the existing wage scale and the preservation of the average independent producer." The position taken by Mr. Hines throughout the controversy thus far would indicate that the success of the new conference depends upon whether the steel companies are willing to offer prices sufficiently lower than the scale approved by the board on April 21 to attract the Railroad Administration into the market, and that otherwise it will continue its policy of purchasing as little as possible.

It is understood that this represents the last effort to instil the breath of life into the price-stabilizing scheme. Following the failure of earlier conferences President Wilson cabled instructions that further efforts be made to harmonize the situation and on April 24 Robert S. Lovett, Henry Walters and George G. Yeomans of the Railroad Administration held a further conference with the Industrial Board without result. The railroad representatives reported to Mr. Hines and the Industrial Board to Secretary Redfield of the Department of Commerce, after which Chairman Peek wrote to Mr. Hines making the offer above referred to and saying in part:

"The previous recommendation of steel prices was made only after careful study of costs prepared by the Federal Trade Commission and the figures of the producers which were checked by experts in the service of the board.

"The prices arrived at were the lowest which the members of the board believed they could recommend and which would at the same time, permit the producers to maintain the existing scale of wages and preserve the average independent producer.

"The President has referred to our board 'as a court of mediation between buyer and seller.' We therefore, must decline to take a partisan attitude and in the absence of new information or data to urge the steel manufacturers to make a reduction in the offered prices, merely because the Railroad Administration requests it.

"If, however, you have any facts, figures or information showing that, on any ground whatsoever, the price recommended was too high, we shall be glad to approach the representatives of steel producers again and attempt to secure a modification of their offer in accordance therewith."

Secretary Redfield also telegraphed Mr. Hines as follows:

"Mr. Tumulty has informed me of the President's cablegram to you, requesting co-operation with myself and associates respecting prices. I regret that meeting of your advisers with Industrial Board Thursday, April 24, failed to advance matters, because they candidly stated they had no new facts and reserved their views respecting proper prices. I shall be more than glad, however, to take any possible further steps that will bring us into accord and relieve existing business tension. Am ready therefore to reconsider candidly all facts you or your representatives may care to present and to give same sympathetic attention.

"You are cordially requested to ask your representatives to confer anew with the Industrial Board, with the spirit on both sides of gentlemen engaged in a common service, seeking a mutual end, speaking without reserve and with entire absence of bargaining and without thought of maintaining previously expressed opinions, save so far only as facts may when fully developed justify. I assure you in advance that the Industrial Board will act in this spirit.

"Kindly advise if possible by telegraph whether you are prepared to act as above suggested. This is asked because you will appreciate that in the absence of action looking to definite results it will be necessary that the members of the Industrial Board resume their personal affairs."

Mr. Hines did not accept the idea of further conferences with the board but accepted the board's offer of mediation. In his statement he called attention to the fact that on April 24 Judge Robert S. Lovett and Henry Walters as representatives of the Railroad Administration had met with the Industrial Board "for the purpose of reaching common ground in a practical sense regardless of former conceptions on either side and had been prepared to offer compromise suggestions looking to an agreement as to prices but that the board declined at the meeting to act except according to its original conceptions which in the opinion of the director general were erroneous and that this attitude of the board practically closed the door to further discussion at that meeting."

The director general in view of the renewed suggestion for conference indicated a willingness to accept the offer made by the Industrial Board in a telegram sent by Chairman Peek on April 26 to bring together representatives of the Railroad Administration and the steel producers.

The resignations of members of the Industrial Board have been in the hands of Secretary Redfield since April 1, but he declined to make them effective until further efforts had been made.

Cost of Train and Locomotive Service

The total cost of locomotive service per locomotive mile in February, 1919, was 120.7 cents as compared with 106.3 cents in February, 1918, an increase of 13.5 per cent, and the total cost of train service per train mile was 169.3 cents as compared with 155 cents, an increase of 9.2 per cent, according to a monthly report compiled by the Operating Statistics Section. The report shows in detail by roads and by regions the freight locomotive and freight train costs for the various items, all of which show an increase as compared with February, 1918, except the items of train men and enginemen. The total cost of train service per 1,000 gross ton miles was 126.5 cents in February, 1919. This is made up of 43.1 cents for locomotive repairs and enginehouse expense, 40.3 cents for locomotive fuel, 3.4 cents for other locomotive supplies, 34.8 cents for enginemen and train men and 4.8 cents for train supplies and expenses. No comparisons are made with last year on the gross ton mile basis. Per locomotive mile the cost of locomotive repairs was 40.2 cents in February, 1919, as compared with 31.5 in February, 1918; engine house repairs were 10.4 as compared with 7.4; train enginemen 18.8 as compared with 20.3; locomotive fuel 47.3 against 43.9, and other locomotive supplies 4 against 3.2 cents. The cost per train mile for locomotive repairs and engine house expenses was 57.7 against 45.2, locomotive fuel 54 against 51.1, other locomotive supplies 4.6 against 3.7, train

enginemen 21.5 against 23.6, trainmen 25.1 against 26.6, train supplies and expenses 6.5 against 4.8. The highest cost for total train service per 1,000 gross ton miles is shown in the New England district, 197.7 cents. The lowest is in the Pocahontas region, 93.9 cents.

Allocation of Equipment

The Railroad Administration is making renewed efforts to get rid of some of the standard freight cars being built on its orders placed last year, which have been allocated to the various railroads, but which many of them have refused to accept. While something over one-third of the equipment has been built, the number of cars accepted by the railroads is between 10,000 and 15,000 less than those built and the balance are being held in storage without stencilling. During the week ended April 19 only 122 of the cars were accepted, although the number built has frequently been 800 or 900 a week. Swagar Shirley, director of the Division of Finance, held a conference at New York on Wednesday with members of the Association of Railway Executives to discuss the subject, but the only announcement after the meeting was that the executives would appoint a special committee to confer with Railroad Administration officials at Washington. One of the reasons for the failure of the railroad companies to accept the equipment is their inability to finance it. It is hoped that a practical plan for financing the equipment may be worked out. The equipment has been paid for by the Railroad Administration as it has been delivered, except that recently it has been necessary to make the payments in certificates of indebtedness and the cost is to be charged against the corporations to which the cars are allocated.

Record Breaking Car Surplus Being Reduced

All previous records as to the number of surplus freight cars in the country have recently been exceeded. On March 1 the total of idle freight cars of all kinds was considerably over 450,000, although it has since been decreased by an improvement in the volume of traffic, particularly in the grain movement to the elevators to meet the drafts made by exports, and by the opening of the lake coal and ore movement, and the surplus of freight cars of all kinds at the present time is somewhat over 300,000. On April 1 it was about 390,000. The largest surplus of freight cars previously recorded was in April, 1908, when the total was over 413,000, and the present surplus is probably greater than it has been at any time since 1908. In 1909 the net surplus was 332,513, and in 1915 it again reached about 330,000. The present surplus began in April, 1918, and it rose gradually until the peak was reached in March of this year. The greater part of the surplus on March 1 consisted of open-top coal cars, because the coal traffic has been at a low ebb since last fall. At the present time it is estimated that there is a surplus of 170,000 to 200,000 open-top cars and it is understood that approximately 125,000 of the total surplus represents box cars stored in western and southwestern regions in preparedness for the heavy loading of grain. On the other hand, there are some occasional shortages of box cars east of the Mississippi and north of the Ohio and since the opening of navigation the surplus of open cars is being absorbed by the lake movement.

The Railroad Administration inherited a shortage which had begun in the fall of 1916 and continued throughout 1917. On January 1, 1918, there was a net shortage of 90,000 and on March 1, 1918, a net shortage of 138,000, but on May 1 this had been changed to a net surplus of 12,000. There was a comfortable surplus for the rest of 1918, which jumped from 91,000 on November 1 to 157,000 on December 1 after the signing of the armistice, and which increased rapidly until March this year.

The regularly published statistics of car surpluses and shortages compiled by the American Railway Association since 1907 (with an interruption from October, 1914, to February 1, 1915), were discontinued by the Railroad Administration last April and the figures have not since been published, but a special study has recently been made by the Railroad Administration of the figures since January, 1918, which shows the following for the period up to February 1, 1919:

	Shortage		Surplus		Net surplus
	Open top	All cars	Open top	All cars	
January 1, 1918.....	.....	110,332	.....	20,337	*89,995
February 1, 1918.....	.....	122,341	.....	24,297	*98,044
March 1, 1918.....	.....	159,992	.....	21,890	*138,102
April 1, 1918.....	13,079	82,555	7,770	54,428	*28,127
May 1, 1918.....	14,160	45,886	14,988	57,921	12,035
June 1, 1918.....	4,861	15,058	11,044	86,282	71,224
July 1, 1918.....	8,248	20,757	11,256	83,563	62,806
August 1, 1918.....	15,311	35,905	8,267	92,339	56,434
September 1, 1918....	10,137	28,870	11,447	64,792	35,922
October 1, 1918.....	4,380	21,248	14,866	66,988	45,740
November 1, 1918.....	3,112	13,788	32,565	105,479	91,691
December 1, 1918.....	2,025	10,350	82,130	167,177	156,827
January 1, 1919.....	96	833	96,744	270,177	269,344
February 1, 1919.....	52	1,036	134,910	355,488	354,452

*Net shortage.

Since January 1, 1907, when the records of car surpluses and shortages were first kept there have been net shortages only in 1907, for a short period in 1909, in 1912, for a short period at the end of 1913 and in 1916, 1917 and the early part of 1918. Throughout the greater part of the time there have been net surpluses.

Weekly Traffic Report

According to a report of traffic conditions for the week ended April 23, the movement of freight throughout the country shows considerable improvement over the week previous. This is especially true with respect to shipments of grain and grain products from the Southwestern and Southern regions. Tidewater coal dumpings increased 37,933 tons in the Pocahontas region over the previous week.

In the Southwestern region the loading of miscellaneous commodities showed considerable increase, forest products increasing approximately 15 per cent over the week previous. A heavy movement of fat cattle from southwestern Texas continues.

A summary follows:

Eastern Region:—The increased movement of freight traffic did not materialize as was expected, but reports from the interior indicate that the general tone of the shipping public is optimistic and improvement is looked for. There is some decrease of furnaces in blast in Central territory as compared with last week's report. General reports indicate decrease in unemployed labor. Passenger reports are very satisfactory, the movement from out of town for the parade of the 26th Division at Boston, April 25, taxing facilities of Boston roads to their utmost.

Allegheny Region:—Freight operating conditions are about normal. Adjudication of labor difficulties in New York Harbor has resulted in a freer movement of traffic. Grain movement continues heavy and special efforts are being made to provide elevators in the Chicago district with sufficient cars to meet loading requirements. The movement of ore via the Lake was resumed April 18. Considerable decrease in the number of open top cars stored, and box car requirements were heavy, but supply ample. Regular passenger travel is normal, but tourist and excursion travel to the seashore resorts is showing heavy increases over corresponding period of 1918. The outlook is for an abnormally large seashore business during the coming season.

Pocahontas Region:—Tidewater coal dumped shows some increase over previous week, but last week's showing of cars loaded in region and received from connections was a disappointment. The present outlook is that April will show im-

provement over March. Total loads, other than coal and coke, decreased 119 cars. Compared with same period last year Tidewater coal dumped decreased 123,668 tons. General passenger travel is about normal as compared with past few weeks, earnings continuing to show increases over same period last year.

Southern Region:—Growers' organizations are being formed at various points for systematic handling of a bumper sweet potato crop; the indications are that an increased movement amounting to several hundred carloads will result. The general freight movement showed some decrease for the past week as compared to the previous week. The movement of crude oil from the eastern Kentucky districts continues to increase, 343 cars having been handled during the past week. Some improvement in the movement of grain and grain products has been noted and the demand continues good, a shortage of soft wheat, however, being claimed by some millers.

Central Western Region:—For the week ending April 22, as compared to same week last year, there was a decrease of approximately 12 per cent in number of cars of freight loaded, the greatest decrease being in coal loading. Live stock loading also decreased considerably, while grain loading shows some increase. The movement of grain products is increasing and the demand for equipment is heavy. On account of the relatively mild winter, reports indicate that the wool clip will be much better in quality this year than in previous recent years. Passenger travel continues heavier than for corresponding period last year.

Southwestern Region:—Loading of grain and grain products, live stock and miscellaneous commodities showed considerable increase, forest products increasing approximately 15 per cent over previous week. Lumber dealers, while complaining that building trade is not reviving, anticipate an early resumption of service. Heavy movement of fat cattle from southwestern Texas continues. . . .

2,104 Persons in Washington Employed in Railroad Operation and Regulation

The supervision of railroad operation and the regulation of the railroads together require the services of over two thousand people in Washington, according to a census just made by a commission which is engaged on a proposed reclassification of governmental salaries. The commission's report embodies an elaborate classification of the people employed in Washington in the various branches of government service, including 1,280 in the organization of the director general of railroads and 824 in that of the Interstate Commerce Commission, or 2,104 out of a total of 101,586 for all the governmental departments. These figures do not include the President and members of Congress and they take no account of either the labor leaders, the state commissioners or the shippers' representatives, many of whom are constantly on hand to offer assistance in one way or another in the processes both of operation and of regulation, nor do they include the large number of railway officers who are frequently called here for conferences, committee meetings, etc.

Attachments Left Subject to Law

The director general of railroads has issued an order effective May 15, rescinding General Order No. 43 made during the war, which provided that money in the possession of carriers under federal control shall not be subject to attachment, garnishment, or like process. This action does not make wages or other money subject to attachment or garnishment if they are not made subject to garnishment or attachment by the laws of the state as modified or affected by the federal control act. It leaves the matter to be governed by the act of Congress and the state statutes where applicable, so that wages and other money in the possession of carriers under federal control will not be subject to garnishment or attachment unless the state law provides for it and the final construction by the courts of the federal control act of Congress permits it. The supreme court of Tennessee recently held that by reason of the federal control act, money in possession of the Railroad Administration is not subject to attachment or garnishment, and that this was the law regardless of General Order No. 43.

In view of this and other decisions, the director general concluded that it was wise to leave the matter to be determined by the law, rather than by any action of his.

Net Operating Income in March Decreased 82 Per Cent

The Railroad Administration again earned a deficit as compared with the standard return, according to preliminary reports of railroad earnings and expenses for the month of March. The net operating income amounted to $10,522,620 for 178 Class I roads, operating 224,000 miles, a decrease of $50,000,000 or 82.7 per cent as compared with March, 1918. The standard return for the Class I roads for March is about $68,000,000 and for three months it is about $170,000,000, so the net operating income for the three months' period is about $128,000,000 short of the standard return. Gross earnings reports for April are also showing very little improvement. For March the operating revenues of the 178 roads amounted to $357,699,961, an increase of 2.8 per cent. Operating expenses were $339,044,348, an increase of 22 per cent. Taxes, $14,536,629, decreased 1.1 per cent. The railroads in the eastern district had a deficit of $1,283,939, a decrease of 107.8 per cent as compared with the net operating income of last year. The southern roads had a net operating income of $4,485,303, a decrease of 72 per cent. The western roads had a net operating income of $7,321,256, a decrease of 74 per cent.

Excursion Rates

The Railroad Administration is making a bid for passenger traffic in these days of reduced freight business by conducting special excursions similar to those formerly made by the railroads. A special Sunday rate of $2.45 for the round trip between Washington and Philadelphia has been announced and also a similar round trip rate of $3.00 between Washington and New York. The war tax is, of course, to be added to these rates. It has also been announced that a special rate of 2 cents a mile with a minimum rate of $2.00 will be made for the round trip for the first convention of World War Veterans to be held at St. Louis May 8.

Lake Line Established

In an endeavor to restore as nearly as possible pre-war conditions, Director General Hines has issued instructions that a lake line be established from Buffalo to Chicago and Milwaukee. The proposed line will operate in connection with all trunk lines to and from Buffalo and the western trunk lines beyond Chicago and Milwaukee in addition to serving the Chicago and Milwaukee territories. To expedite the movement of freight and save excessive terminal work, one dock at Buffalo has been designated as point of interchange for all eastern roads. It is known as the Tifft Farm terminal of the Lehigh Valley. Practically the same scale of differential rates under all rail, as were in effect in 1917, has been authorized.

Railway Developments in Foreign Countries

The Market for Railroad and Telegraph Supplies in Trinidad; Other Notes of Interest.

THE POLISH DIET is considering bills for the construction of new railways, and it is hoped that construction can begin shortly in order to provide work for some of those whose lack of employment has made them the prey of agitators.

The railroad bridge over the Tornea Elf river in Finland is completed, according to report, and by the present is probably in use, thus establishing the long awaited through railroad communication between Scandinavia, Finland and Russia.

The National Exposition of Venezuela will open between the middle and the end of May. Manufacturers of motors, trucks, agricultural machinery, tools, implements, rolling stock, and farm railways will be permitted to exhibit their goods. It is expected that competition among the various countries interested in this market will be strong, as the farmers of Venezuela are unusually prosperous and in a buying mood.

Italian Railwaymen's Claims

The executive committee of the Railwaymen's Union, including delegates from every important railroad center, recently met in Rome and passed a resolution urging the government to grant all demands made concerning the new scale of wages and an eight-hour working day.

British Locomotives in France

In reply to a question in the House of Commons recently, Captain Guest, joint parliamentary secretary to the treasury, said that there were 423 locomotives owned by British railways still retained in France; 36 have been returned, and the remainder are being returned as they can be released, and as speedily as trans-channel facilities permit. There are in addition 786 locomotives in France which are the property of the war department.

Lubricating Oil Desired by Bulgarian State Railroads

Chargé d'Affaires Charles F. Wilson has transmitted to Commerce Reports from Sofia, Bulgaria, a list of lubricating oils required by the Bulgarian State Railroads. The quantities are as follows (1 kilo equals 2.2 pounds): Engine oil, 1,300,000 kilos; cylinder oil, 500,000 kilos; superheated cylinder oil, 200,000 kilos; axle oil, 600,000 kilos; gas oil, 200,000 kilos; colza, 50,000 kilos; linseed oil, 30,000 kilos; kerosene, 40,000 cases; and benzine, 1,200 cases.

Dutch East Indies

The continuing prosperity of the islands comprising the territory known as the Dutch East Indies is shown clearly by the extensive plans which the government is making for the extension of the already excellent railroad facilities of the islands. No fewer than seven new systems and extensions are planned, and work on eight lines will begin almost immediately. Sales were made recently in the United States of quantities of railway steel material. It is pertinent in this connection to note the discovery of extensive iron fields on the island of Celebes. The quantity of ore in the surface field on one deposit is estimated at at least 5,000,000 tons, with 155,000,000 tons of clay ore, which can be easily and cheaply mined. Plans for developing the fields, in which the government will have certain rights, are being outlined.

British Officers of Railways of Argentina to Visit That Country

It is understood that a party of railway officials from England is about to visit the Argentine. Among the number are Sir Henry Bell, chairman of the Buenos Ayres Western, and a director of the Great Southern; Albert E. Bowen, chairman of the Great Southern, and a director of the Western; and Sir Harry Livesey, of a well-known firm of consulting engineers. Some of the directors have been accustomed to visit their Argentine railways annually, but this is the first visit since the outbreak of the war.

Electrification on the Paris, Lyons & Mediterranean

The Paris, Lyons & Mediterranean Railway Company is proposing, subject to government sanction, to electrify the line between Clermont Ferrand and Nimes, via Alais. The distance is about 130 miles. The necessary power will be obtained by the construction, in the Department of the Lozere, of a barrage or dam near Florac, closing up a small valley, so as to form a fresh-water lake of six miles in circumference. The lake will contain 45,000,000 cubic metres and the water will fall a distance of 500 ft. The cost of constructing the lake and power station is estimated at about $40,000,000.

France and the Channel Tunnel

The Channel Tunnel Investigators' Committee, which was constituted by a ministerial decree dated September 3, 1918, and has already held several sittings, reassembled in Paris recently under the presidency of M. Claveille, minister of public works and transports, to consider definitely the conditions for the construction of the tunnel when an agreement has been come to between the British and French governments. It should be understood that while the British government recently announced that it was considering the project, it has as yet announced no definite decision as to whether the plan would be carried out or not.

Electrification of Swedish Railways

The Swedish State Railway Administration has published a statement to the effect that after investigations regarding the electrification of the entire Swedish railway system, it has come to the conclusion that the plan can be carried out in 30 years at a cost of 192,000,000 kr. The advantages of electrification are that the whole of the power needed can be obtained from eight Swedish electric power stations, the traffic capacity will be considerably increased, and a great saving in staff costs will be effected. Sweden's enormous water power will, in the first place, be made available for this purpose.

New Railway Laws in Venezuela

New railway laws have recently come into force in Venezuela, which materially affect future construction in that country. Hereafter, the government will no longer guarantee the interest on capital invested in the construction of railways, and all contractors are to be required to make a cash deposit proportionate to the length of the line and the width of the gage in accordance with the following scale: 0.610 metre, or 2 ft. gage, 600 bolivares per kilometre; 0.915 metre, or 3 ft. gage, 900 bolivares per kilometre; 1.08 metre-gage,

1,000 bolivares per kilometre; and 1.435 metre, 4 ft. 8½ in. gage, 1,400 bolivares per kilometre. (One bolivar equals 19.3 cents.) These deposits may be reduced by presidential decree by as much as 15 per cent. A reduction in rates is to be dependent upon the tonnage hauled beyond a certain amount.

Standard Specifications in Spanish

Industrial Standards No. 29, giving in Spanish the standard specifications for cast-iron locomotive cylinders, as adopted by the American Society for Testing Materials, is the latest of the series of industrial standards to be issued by the Bureau of Foreign and Domestic Commerce. These booklets are designed primarily for distribution in Latin-American countries to assist in introducing American construction and engineering materials. Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at five cents each.

Concrete Cars in the Netherlands

The construction of concrete rolling stock for railroads is under way in Holland. Only the wheels, axles, buffers and couplings are made of steel. The weight of cars of the new type is said to be no greater than that of steel cars, the construction is simpler and cheaper, and the upkeep light. This announcement, which is well authenticated, is of special interest in view of the establishment of large steel mills in Holland, and the proposed extensions of the railroads of the Dutch East Indies, a large part of whose material has been bought in the United States in the past, and for which additional orders have been expected.

New Railway in Colombia

The Department of Bolivar, Colombia, according to Trade Commissioner P. L. Bell, has under consideration the building of a new railroad to connect Cartagena with the line now being constructed north from Medellin in the Department of Antióquia. A light, narrow gage road is to be built, the preference being for an electric line, using Diesel electric locomotives of light weight. The chamber of commerce has secured $20,000 to defray expenses of the preliminary location and survey of the new line, and there is every evidence that the department will push the work as fast as possible. Although no definite specifications of requirements are available, they are being prepared now. [The name of the official to whom inquiries should be addressed may be obtained from the Bureau of Foreign and Domestic Commerce or its district and co-operative offices by reference to file No. 40197.]

Mexico Has Lost 10,000 Freight Cars

According to Felipe Pescador, director general of the National Railways of Mexico, revolutionists and bandits have destroyed 10,000 freight cars and many passenger cars during the last eight years. There are now available approximately 16,000 freight cars for handling the traffic of the different divisions of the system which are in operation. The shops of the company are making repairs to damaged cars as rapidly as possible, there being at this time 3,000 of such cars in the yards awaiting shop. Mr. Pescador says that the plan of leasing American cars or permitting them to be employed in handling international traffic is not practicable at this time for the reason the National Railways is so short of locomotives that it is impossible to handle any more cars than are now available in Mexico. If engines could be obtained from the United States it would be a good idea to obtain the use of foreign cars, he thinks. The supply of locomotives for the National Railways is being gradually increased by repairing those that were damaged by internal troubles. At this time there are 380 locomotives in the shops undergoing repairs. The company also has ordered 20 locomotives from the United States.

Mexico Now Producing Rails

The iron and steel plants of the Monterey Iron & Steel Company will be running full blast in all of its departments within a few weeks, it is announced. It is now giving employment to about 1,200 men, and the number will be increased to about 2,500 when full operation is resumed. The orders for steel rails are not confined to the National Railways of Mexico, but embrace a number from mining companies and private industrial interests, it is stated. The demand for structural steel is constantly increasing. This comes from the larger cities of the country. The company is now obtaining its iron ore supply from its own ore beds, situated only about 60 miles from Monterey. Formerly its ore supply came chiefly from Iron Mountain, situated at Durango. The Monterey Iron & Steel Company is composed of Italians and the plant represents an initial investment of $10,000,000 gold.

Rumania's Need for Railway Equipment

Rumania, with a population of 7,500,000 before the war, was the richest of the Balkan countries, says a publication of the Guaranty Trust Company, New York. Enlarged by the inclusion of great areas formerly attached to Austria, and probably Russia, but inhabited, nevertheless by Rumanians, she will be, potentially, one of the powerful nations of Europe. There is little doubt, in the minds of most observers, that with direct water communication with the United States, via the Bosporus to the port of Constanza, she will be a larger buyer in the United States, always provided that favorable terms can be arranged. So far, it is said, the Canadian Government has advanced $25,000,000 for purchases in the Dominion, chiefly of agricultural products. Of 2,000 locomotives in Rumania before the war, the Germans took all but 15. Six hundred must be purchased shortly, and for this purchase approximately $30,000,000 will be needed. Mechanical equipment of all sorts, clothing, and other supplies are necessary, and purchases probably will be made when the terms can be arranged.

Priority Traffic in France

Under the terms of a decree published in February, which handed back the control of the French railways to their peace-time administrative control, special provision is made for certain forms of priority traffic, says a recent issue of the Railway Gazette (London). These include the conveyance of demobilized men and soldiers on leave; the evacuation of material; the handling of the food traffic, often for long distances, to meet the requirements not only of French and Allied troops, but also of the civilian population of reconquered and occupied territories; and the import traffic in such essential commodities as coal. It appears that this priority traffic is being conducted under conditions of great difficulty. In a statement to the Minister of Public Works, the president of the Committee of the Ceinture system has pointed out that the operating problems in the army zone are considerable, due to the enforced concentration of the traffic on a limited mileage as the result of destruction by the enemy. For instance, a single section of the Eastern Railway, via Toul and Nancy, is being called on to handle traffic for Alsace, the Rhine Provinces, part of the Ardennes and Belgium; while three lines on the Northern Railway are being simultaneously burdened with the task of assuring the food supplies and the demobilization of the British forces, the Pas-de-Calais coal field traffic, and communications with Belgium and the devastated regions of northern France. The operating difficulties of these two railways, the president

points out, recoil on the other French systems, and so far the employment of locomotives and rolling stock handed over by Germany under the terms of the armistice has not materially relieved matters, owing to the condition in which much of this stock has reached France.

Railway Construction in Ecuador

The construction of a railway in Ecuador, from the capital (Quito) to Esmeraldas, has long been under consideration; many different contractors have been involved, while almost as many different groups of capitalists have been invited to participate, says the Railway Gazette (London). The project has its advocates and its detractors. The latter seem to predominate. But the government is determined to proceed with the building of the line, which has now found contractors who will see the thing through, perhaps. Plans have been prepared which show that the section to Ibarra will have a length of 167 km., and a 3.5 per cent grade. The construction work is estimated to cost between 8,000,000 and 8,500,000 sucres (about $4,000,000), but the total will probably come out at about one-half as much again. The Ibarra Railway, it is resolved, shall be built in two sections. What is known as the Ibarra section—upon which work was commenced in August, 1917—has less than one-third of its length graded, but, on the other hand, it has completed 6 open and 87 covered culverts.

The Chimbacalle section has 24 kms. graded. The Sibambe to Cuenca Railway is divided into three sections, namely, Sibambe, Cuenca and Chunchi-to-Tambo sections. The Curaray Railway is now practically completed as far as Pelileo, and between 30 and 40 km. of the line are in operation.

Trinidad Market for Railway and Telegraph Supplies

There is considerable agitation in Trinidad at present, says Consul Henry D. Baker, Trinidad, British West Indies, for better railway service, especially in regard to reliable time schedules and more up-to-date equipment. Cars still have old-fashioned hand brakes, although it is recognized that American air brakes must be substituted in the future. Owing to the high prices of materials and the difficulties in arranging prompt delivery of goods, the roads have been running with decreasing efficiency during the war.

Equipment, consisting of four large and three small locomotives, ironwork for 100 freight cars, and about $80,000 worth of bridge material, recently ordered by the government railway from England is the first to be purchased in five years. An order consisting of 500 tons of 60-pound rails, English standard, 33 feet in length for relaying track has also been placed in the United States. The latter country would have been a more convenient market for the rolling stock mentioned above, but American manufacturers, on comparatively small orders of this sort, are unwilling to alter their patterns to conform to local specifications. For instance, locomotives here use brass tubes in their boilers and have copper fire boxes instead of steel. The government railway considers uniformity an important factor, as it desires to avoid carrying too great a variety of spare parts in stock, and it is found more convenient to follow British standard specifications.

Proposed Improvements

The railway is arranging for all its locomotives to be equipped with oil burners, and the Legislative Council of Trinidad has just made an appropriation of $8,640 to purchase two tank cars to carry oil on the government line. Besides having to provide for transportation of its own oil, the road has made contracts with several estates which it can not fulfill without additional cars. These two cars would be the Government's share of an order of ten cars to be imported from the United States by a large oil-producing company on the island.

The railway is planning to improve the lighting facilities at its workshops and yards and will want two electric-light generators of either 110 or 220 volts, together with an oil engine for each generator of 50-kilowatt capacity. These will probably be purchased in the United States. All passenger trains on this line are illuminated by an American light system, the batteries being located in the brake van or baggage cars. This method of lighting is also to be installed shortly in all the stations of the railway, as it has been found to be more satisfactory and less expensive than the gas-lighting systems used heretofore.

Mileage to be Increased—Revenue

The Trinidad government railway has altogether 115½ miles of railway open for traffic. It also has three steamers, two of them used for traffic between Port of Spain and the small islands in the Gulf of Paria, and the other for traffic from San Fernando to Brighton, at the asphalt lake, and to the small towns on the Cedros Peninsula, at the extreme southwestern end of Trinidad, the railway not being extended along the coast south of San Fernando.

There is a public demand for an extension of the government railway to the east and north coasts of the islands. One branch line, which extends from Port of Spain to Sangre Grande, lacks about eight miles of reaching the east coast, and another branch, to Rio Claro, comes within 15 miles of the important cocoanut regions at Mayaro, also on the east coast. There the road will probably be extended, while another extension is planned to go to Salybia and Toco Bays, on the northeastern coast. This would make it possible to have a daily steamer communication between Port of Spain and the island of Tobago, reached now only by a coastal steamer making the trip once a week. While there have been no appropriations for such extensions, yet the Governor of Trinidad in his address opening the Legislative Council several weeks ago, said:

> During the past year a committee appointed at your instance has been considering the questions of the improvements and extension of the communications of the colony and the development of its resources. The committee is making good progress in the task assigned to it, and I hope that before the session closes it will be able to lay before you a preliminary report containing recommendations regarding road and railway extensions and the improvement of the Tobago services.

The last report of the government railway, covering the year 1917, shows that the total revenue earned was $756,652, of which $717,289 was contributed by the railway proper and the balance by the railway steamers. The expenditures for the same period were $644,294. The total number of passengers carried in 1917 was 1,701,665 and the freight amounted to 277,370 tons. The chief articles shipped over the line included sugar cane, sugar, molasses, rum, petroleum products, fruits (chiefly oranges and bananas for local use), cedar and other native timbers for export.

Private Lines for Sugar Estates

In addition to the Trinidad government railway the leading sugar estates of Trinidad also maintain private lines for the conveyance of sugar cane to their factories. The Usine Ste. Madeleine Sugar Co. has about 40 miles of railway through its sugar-cane farms; Waterloo Estate, 20 miles; Caroni Estate, about 15 miles; and the La Fortunee and Hermitage Estates, about 18 miles. Each one requires a certain amount of new rails every year for replacements and extensions, the average being about one-half mile each. The rails used are chiefly those rejected by American railway companies as defective, but as the sugar estates use their lines only for about three months a year, and very little traffic is carried over them, the defects do not matter. The rails weigh as much as 55 pounds a yard and the tracks are standard gage, 4 feet 8½ inches.

The locomotives used on these sugar-cane railways are

four-wheeled and have a 5-foot wheel base, with a maximum weight of 20 tons. They are equipped to use mineral-oil fuel and have no bogies or trailers. The distances are short, but there are often very sharp curves. The sugar-cane trucks or wagons are of 6 to 10 tons capacity, net weight of canes, and have side doors. The canes are loaded into the cars by means of derricks. The sleepers or ties are of local balata wood.

Means of Communication to Be Increased

The telegraph department of the government railway has opened 138 miles of telegraph wire exclusive of duplicate wires, and also 116 miles of telephone wire. The total number of messages, public and railway, passing over the wires in 1917 was 114,120.

It is expected that orders will be placed in the United States very shortly for 30 miles of telegraph wire (No. 8 standard wire gage), and also for 35 miles of telephone cables, 10 miles of which will be two-wire cables, and 25 miles, four-wire cables. This will be used for the railway line between Port of Spain and San Fernando, and for communication beyond that to La Brea at the asphalt lake. About 25 new telephone instruments will also be ordered in the United States. The telegraph wire will all be used for replacements.

Comparison of Fuel Cost in 1917 and 1918

The fuel conservation section, division of operation, United States Railroad Administration, recently issued a statement showing the increase or decrease in the cost of locomotive fuel on the basis of the pounds used per thousand gross freight ton miles, and per passenger train car mile for the last five months of 1918 compared with the same period in 1917. The period referred to was taken as being reasonably comparable, from the standpoint of uniform weather conditions, absence of any general congested condition or other serious disturbing factor. The following summary of results based on the cost of coal, exclusive of the haul on users rails, is taken from this statement:

	Freight Train Service				Passenger Train Service		
	Roads for which complete information is available						
Region	Per cent of total mileage of all roads	Total savings	Per cent savings	Estimated total savings for all roads	Total savings	Per cent savings	Estimated total saving for all roads, passenger and freight service
Eastern—							
New England dist.	36	$106,169	4.5	$312,200	L $278,783	L 6.1	$33,447
Central dist.	37	1,328,364	11.2	2,297,000	564,338	8.6	2,861,338
Ohio-Indiana dist.	65	349,079	14.0	472,500	63,061	7.1	535,561
Total Eastern	54	1,783,612	10.0	3,061,700	348,646	2.9	3,430,346
Allegheny	60	1,260,053	9.3	1,856,000	101,227	1.4	1,957,227
Pocahontas*	15	.....	...	.....	38,528	4.6	38,528
Southern	70	145,817	1.5	208,000	98,951	1.7	306,951
Northwestern	57	755,816	7.4	1,357,600	171,460	2.6	1,529,060
Central Western	98	1,574,578	6.8	1,597,000	437,130	5.6	2,034,130
South Western	97	343,734	3.5	352,000	33,866	0.8	385,866
Grand total all regions	97	$5,863,610	7.0	$8,452,300	$1,229,808	2.8	$9,682,108

L—Indicates loss.
*Pocahontas region freight train service total omitted, since information on which to base estimate is inadequate.

In determining the estimated total saving in freight train service for all roads in each region, it has been assumed that the average per cent saving for the whole region is the same as the average per cent saving for the roads in that region for which complete information is available. The grand total saving for all regions has been taken as the sum of the regional totals.

The loss shown in passenger train service for the New England District of the Eastern Region is due to the extraordinary increase in cost of coal used in 1918 compared with 1917. The pounds of coal per passenger train car mile were 6.8 per cent less in 1918, than in 1917. This statement does not include fuel used in mixed or special train service.

Beware of Detours!

George Bradshaw, supervisor of safety of the Pere Marquette and associated lines, expands the idea of "safety first" to take in moral and economic questions, as well as matters of bodily safety, and in his latest bulletin (No. 13) addresses the wives of railroad men, reminding them of the importance of providing healthful meals and comfortable and quiet sleeping rooms; of always seeking domestic harmony and of keeping out of debt. On this last point (addressing the husbands as well as the wives) he says:

Pay cash or go without.—This is a good rule for every house. In many cases it is best to go without and save the cash. Ordinarily, there is only one justification for going into debt voluntarily, and that is to buy a home at a reasonable price and on reasonable terms.

The installment craze is a facing-point switch, where many a family train has been derailed. The installment method of buying is a detour from the better and safer road called

Copyright, 1919, by George Bradshaw.

Bad Company for a 31 Train Order

"Cash Drive." The firms doing business on the detour road have their tempting window displays and seductive advertisements to make you believe that the detour is not a detour, but the regular highway. Don't you believe it. That road is a detour. It may be the better road for you at certain times; but remember, it's a detour. Careful and experienced tourists are shy of it. There ought to be more happiness pushing a wheelbarrow than riding in a motor car with a mortgage. Can you save? Are you able to console yourself with the philosophy of going without when you want something you can't afford? Can you go without halting right by the show window with its luring diamonds, furs or other things your neighbors have and you want, and head straight for the savings bank in the next block? Can you do that every pay day till the bank cashier in his cage comes to have more attraction for you than the finest show window in the city? If you can, you have stood the acid test.

Major General Sir Henry Worth Thornton, K. B. E., general manager of the Great Eastern Railway of England, and inspector general of transportation in the British army in France, arrived in New York last week on the steamship "Aquitania." General Thornton is on a visit to his mother at Newtown, Pa.

Proposed Solution of Railroad Problem

By Clinton D. Winant

Formerly Examiner for the Interstate Commerce Commission

THE GOVERNMENT has decided to regulate your business, Mr. Business Man, and this is the method hit upon. We will assume that you are engaged in the manufacture and sale of a great number of different commodities. A commission is appointed with power to determine reasonable rates for all commodities handled by you. This is interpreted to mean that each article sold by you shall yield only a certain fixed profit (say, for example, 6 per cent on the cost of producing the article). In cases coming before it, the commission is not concerned in the general question whether your investment shows a fair return as a whole. It limits its view to the particular case in hand. If the particular price asserted appears to yield a larger return than would be sanctioned on the investment as a whole, the price on that particular article will in all probability be cut. And you, Mr. Business Man, in continuing to talk about a fair return on "your investment as a whole" are simply out of order. You must learn to conduct your business on a basis that will keep the profits on every article the same.

Outside the hearing room Mr. Business Man might well say, "That each commodity sold or service rendered should by itself show a fixed profit is not important and often not possible of realization. In every business the vital thing is that the capital invested be rewarded. The success of any business depends upon the totality of revenue received and not upon the profits derived from any particular article."

But the system of railroad regulation now in vogue continually places upon the stand one single service (i. e., one single transportation unit purveyed by the carrier). If, compared with various other services, the charge appears to be somewhat high the chances are it will be cut. From the nature of the case the general condition of the carrier is lost sight of. After several hundred of such onslaughts what occurs? Under such a system but one result can occur. The road goes into the hands of a receiver.

Now what is the remedy for all this? It is obviously to permit the carrier whenever the *quantum* of a rate is challenged to come into court and say, "Here is my whole schedule of rates. While one single rate may appear high as compared with other rates over my line even under existing rates a fair return on the invested capital is not being earned. We are perfectly willing to alter the present schedule of rates as you see fit. All we seek is a fair return on our capital. But with our present return we do not think it fair for the regulating body to pick out one single rate which it may think high and order it reduced without indicating to us any way whereby the ensuing loss can be made good."

Under the procedure suggested all pending complaints against one carrier which affect merely the *quantum* of its rates could be disposed of by one investigation of the rates as a whole. This would save the enormous duplication of work which now occurs when these cases are considered separately.

The only bulwark which will protect the railroad investor is a law which will secure for him a fair return on his investment. How can this be realized? It is believed by providing that *"the power to reduce a rate or rates or deny an increase when the carrier shows it is not earning a fair return shall not be exercised without first indicating how a fair return can be obtained by some means other than that proposed by the carrier."*

It would still appear to be the law that an investor in public securities is entitled to a fair return on all moneys invested in the public interest. The question is similar to the one which is at the heart of governmental regulation of the issue of securities. If a proposed expenditure will be in the public interest, the railroad should be permitted to raise the needed money. Perhaps some governmental certificate to that effect will some day act as a sort of stimulus to the moribund credit of the railroads.

The amount of capital invested in American railroads upon which a fair return may be asked will not be known exactly until the so-called "physical valuation" of the roads is completed. Until such time what may be taken as a fair rate of interest on the invested capital?

Pending the completion of the "physical valuation" the compensation to the carriers provided for in the Federal Control act might well be used as affording a fair return on the capital invested. Of course, an increase in rates sufficient to provide for additional capital necessary for improvements should be allowed when the commission is of opinion that the proposed improvement is in the public interest.

It has been suggested that "the determination of what rate shall be paid should be taken" from the Interstate Commerce Commission while entrusting to it the accounting end of the railroad problem, the maintenance of parity between shippers and places and control over the issuance of securities. With this view, the writer cannot agree.

If it is true that "the commission has failed utterly in this commercial problem of fixing the necessary rate to enable the railroads to prosper and to obtain the needed capital to grow" it is simply because it was not given adequate power. It was given not too much responsibility but too little. It should be made responsible not only that the shipper obtains a reasonable rate but equally responsible that the investor obtains a reasonable return. This reasonable return should be made definite by law so that its power to control rates is affected thereby. Set a standard for the commission, for example, the average annual railway operating income for the three years ending June 30, 1917, as a fair return on each road's investment. If the returns of the roads fall below this standard the curtailment of the carrier's revenue by the condemnation of any rates assailed should not be allowed without the granting of a proper increase in other rates. The commission would then be in a position to deal with the situation effectively. It could order the reduction of one rate while at the same time finding the rates of the carrier generally too low.

The great percentage of cases brought before the commission present upon analysis merely questions of discrimination or undue preference. It would seem that much confusion would be avoided if cases involving the *quantum* of rates were placed upon a separate docket.

Summary of Remedial Legislation

1. A repeal of the federal control act.
2. When a carrier shows that it is not earning a fair return, no rate should be reduced or increase denied by the commission without first indicating to the carrier how a fair return can be obtained by some other method than that proposed by the carrier.
3. Enactment of the standard set up in the federal control act for compensation to the carrier as the standard of a "fair return" pending the completion of the physical valuation.
4. A complete divorce on the commission's docket of cases involving the *quantum* of a rate as distinguished from cases involving undue preference (*i. e.*, a relationship of rates).
5. The commission should be given power over the issuance of securities of interstate carriers.
6. The commission should have power over all rates of interstate carriers irrespective of whether traffic is interstate or intra-state.
7. The anti-trust laws and anti-pooling provisions of the Act to Regulate Commerce should be repealed in so far as they affect carriers by railroad.

General News Department

The Committee on Automatic Train Control of the United States Railroad Administration left Chicago on April 28 for a trip of inspection of automatic train stops at Spokane, Wash., San Francisco, Cal., and Oroville, Cal.

The Associated General Contractors of America are preparing to establish a clearing house for workmen, an employment bureau for the service of members of the association. The work will be handled through the office of the secretary at 111 West Washington street, Chicago.

The Strike of 1894 figures in a suit now on trial in Chicago. After 25 years, the suit of the Yazoo & Mississippi Valley, now operated by the Illinois Central, against the city of Chicago for $20,000 damages has been brought to trial before Judge S. T. Page in the United States Circuit court. The suit is for loss by the destruction of freight cars at the time of that noted strike when federal troops were called to guard property. Many of the witnesses called at the opening of the court were reported dead.

J. R. Holman, formerly (to September, 1915) chief engineer of the Oregon-Washington Railroad & Navigation Company, now colonel in command of the Eighteenth (railway) Engineers, at Bordeaux, France, has been awarded a Distinguished Service Medal. The order of General Pershing, dated March 27, commends Colonel Holman in connection with his supervision of construction in the vicinity of Bordeaux, for the display of "unusual judgment and great executive ability"; and in addition, "he rendered valuable services and advice to the other departments of Base Section No. 2."

The American Short Line Railroad Association announces that an important meeting of all short line railroads in the United States will be called to be held at Washington, D. C., about June 1, or as soon as President Wilson announces the date for the extra session of Congress. The special object to be considered is the legislation necessary to increase and protect transportation facilities, especially the short line railroads. It is planned to hold a three-day meeting about 10 days after Congress meets, and to have each session addressed by a prominent speaker interested in transportation problems. The proposers expect to have a very large attendance.

The Chicago section of the American Institute of Electrical Engineers and the electrical engineering section of the Western Society of Engineers held a joint meeting in Chicago on April 28. An interesting paper on "Wireless Telephony and Telegraphy in the War" was presented by A. A. Oswald of the Western Electric Company, New York. Mr. Oswald, during the war, was research engineer on the development of wireless telephony and telegraphy. He treated in a general way the apparatus which has been developed and its various uses in connection with military and naval warfare for land, air and water service. A number of slides were shown to illustrate the various types of apparatus in use and the diagrammatical charts of the sending and receiving stations in the fighting zones.

Railway Projects in South Dakota

Reports from South Dakota show that organizations are being formed to advocate the building of railway extensions. In the southern part of the state west of the present terminal of the Chicago & North Western at Winner, S. Dak., there is a large section of the state which has been rapidly developing during the past four years and which is asking for better railroad facilities. A similar move is being made in Meade county, where the effort is to have either the Chicago, Milwaukee & St. Paul extend southwest from its present terminus at Faith or the Chicago & North Western to extend from its present terminus at Newell east into that territory. Improvements on the Chicago, Milwaukee & St. Paul in this territory continue to be made and heavier rails have been laid between Aberdeen, S. Dak., and Mobridge. A cut off to save several miles has also been built near Mobridge.

Certificates of Indebtedness

The Railroad Administration up to May 1 had issued its certificates of indebtedness to railroads on account of compensation to meet the April and May requirements, to the amount of about $76,000,000. It had issued certificates of indebtedness to the equipment companies for cars and locomotives to the amount of about $17,000,000. The exact total of certificates issued for these two purposes was $94,267,733.

American Railroad Association Moves Chicago Headquarters

The American Railroad Association has moved its Chicago offices from the Transportation building, 608 South Dearborn street, to the Manhattan building, 431 South Dearborn street, where the entire fourteenth floor has been secured for its offices and those of the railway associations which have been merged or affiliated with it. The office of the secretary of the Master Mechanics' and Master Car Builders' associations has been moved to the same building, and also that of the secretary of the American Railway Engineering Association, heretofore in the Karpen building.

Large Safety-First Meeting at Cleveland

Officers and employees of the New York Central Lines, to the number of more than 400, attended an enthusiastic safety meeting at the Statler hotel, Cleveland, Ohio, on Friday, April 25, and enjoyed an elaborate program prepared by General Safety Agent M. A. Dow. Among the guests present were A. F. Duffy, manager of the safety section of the United States Railroad Administration, and other representatives of the government, and W. G. Lee, president of the Brotherhood of Railroad Trainmen. Addresses were given by Mr. Dow, Mr. Lee, and others. W. R. Rasmussen, representing the National Safety Council, said that that organization intended to open headquarters in Ohio or Indiana. Mr. Rasmussen said that he found the New York Central highly praised for its safety work in all parts of the country and in all industries. Mr. Duffy gave credit to the New York Central for the plan and standards which have been adopted by the Railroad Administration in the establishment of safety committees all over the country.

Waterways Convention

The second annual convention of the Mississippi Valley Waterways Association was held at St. Louis, Mo., on April 18, at which resolutions were passed urging the Railroad Administration to extend the same service and operation of boats on tributaries of the Mississippi as exist on trunk lines and the extension of joint rail and river rates by the government. Other resolutions were passed urging that the jurisdiction of the Interstate Commerce Commission be extended to waterway problems, that Congress appropriate $100,000,000 for the completion of improvements on the Mississippi river and its tributaries and the establishment of a fleet of four towboats and 24 barges for hauling freight on the upper Mississippi.

The projects already approved by Congress, but for which it has not as yet provided funds, include the completion of a 6 ft. channel on the Mississippi river from Minneapolis to St. Louis, a 9 ft. channel from St. Louis to New Orleans, a 6 ft. channel

from Kansas City, Mo., to St. Louis in the Missouri river and a 9 ft. channel in the Illinois river from Utica, Ill., to St. Louis; completion of the remaining three locks on the Ohio river, making that stream navigable from Pittsburgh, Pa., to Cairo, Ill., and the admission of the Tennessee river into membership in the eighth district of the association. James E. Smith, of St. Louis, was re-elected president of the association.

A Transportation Corps in Northern Russia

According to the March 8 issue of "Rails and Sails," the publication of the Transportation corps with the American Expeditionary Force in France, 720 men of the Transportation corps have left France for Russia. This force is divided into two companies of 360 men each and has been designated as the North Russian Transportation Corps Expeditionary Force. These men are going to Russia by order of President Wilson in response to a request by the British for railroad troops to operate on the line of communication from the Murman Coast south to the Bolshevik front. In commenting on the organization of the new expeditionary force the "Rails and Sails" says that when the call was issued for volunteers five or six times as many men offered their services as were needed. The two companies sailed for England the latter part of March, and from there they sail to Russia. Major E. E. MacMorland, Coast Artillery corps, who has been on duty in the office of the Director of Military Affairs, has been placed in command of the expedition.

Proposed State Purchase of the Denver & Salt Lake

Various reports of the contents of the Steele bill passed by the Colorado House of Representatives and Senate and providing for the acquisition and operation of the Denver & Salt Lake and the boring of the James Peak tunnel have been made. Yet few of the reports contain the true provisions included in this act. The first section of the bill calls for the appointment of a state railroad commission consisting of five members to be appointed by the governor with the consent of the Senate. The powers and duties of the commission so formed are specifically described in the bill. Provision is made for the condemnation of railroads operating wholly within the state, to empower this commission to institute proceedings in eminent domain and for the condemnation of the Denver & Salt Lake, to the end that the state may acquire and operate this road. The commission is also instructed to ascertain the approximate cost of purchase and such condemnation, to ascertain the approximate cost of construction and equipment for operation by electricity of the James Peak tunnel upon the line of the Denver & Salt Lake, to ascertain the approximate cost of extension, including equipment, of the Denver & Salt Lake from the present terminus at Craig, Colo., by the most feasible route to the western boundary line of the state and from its present line near McCoy, Colo., to a junction with the Denver & Rio Grande at Dotsero, Colo. When the approximate amount has been ascertained, there will be submitted to the voters of the state a constitutional amendment providing for the issuance of 30-year 4½ per cent bonds of the state sufficient in amount to pay for the condemnation, the construction of the James Peak tunnel and the extensions mentioned. Similar powers are given to the railroad commission to take action in regard to any railroad whose lines are entirely within the state of Colorado.

New York Central Rally

In New York City on Tuesday afternoon, April 29, the New York Central held a grand rally which was a combination of a welcome home to seven hundred employees of the road who have been in the military or naval service, and have returned to the railroad, and a gathering for stimulating subscriptions to the Victory Loan. Of the thousands of employees of the railroad who served their country in the great war, over 1,000 have returned; but this gathering included only those in and near New York City. The announcement of this meeting says, by the way, that many of these returned soldiers are being employed in better positions than they had when they went away. This rally was held out of doors, on Park avenue, north of the Grand Central Terminal. This avenue, about 150 ft. wide, is built on the roof of the Grand Central Terminal yard, and its broad open spaces have been beautified with elaborate decorations, including columns, flags and heroic figures. There is an immense pyramid, covered with 12,000 German helmets, and the street is temporarily named "Victory Way."

Many thousands of the employees, men and women, from the general offices and other departments, attended the rally, and two hundred young women from the offices mingled with the crowd selling Victory notes. From the windows of the ten-story army hospital immediately east of the "Victory Way" hundreds of wounded soldiers looked down on the scene.

The chairman of the meeting was Marcus A. Dow, chief of the New York Central Safety Department, and among the speakers, besides officers of the road, were William G. Sharp, former ambassador to France, and Colonel William Barclay Parsons, commander of the Eleventh Engineers, just returned from Europe.

Telegraph and Telephone Systems to Be Returned

Postmaster General Burleson has ordered the return of the marine cable systems, the operation of which was assumed by the government on November 2, to their owners as of midnight, May 2, and has announced that the telegraph and telephone lines will be returned to the various companies as soon as legislation can be secured from Congress safeguarding the interests of their owners. This announcement was made after the postmaster general had been subjected to a great deal of criticism for his handling of the telegraph and telephone lines. In a public statement he said that at the time the government took over the control of the wires extraordinary and abnormal conditions existed, resulting in a constantly increasing and very high operating cost which has necessarily continued, and with the early coming of the armistice the accentuated cost of operation, diminishing revenues and the uncertainty in the period of government control, presented such a situation that those in charge for the government were able to accomplish but little by way of unification or to go forward with their policies of economy and consequently were soon brought face to face with a very serious problem. The only answer, he said, was an increase of rates, which was necessary and in no sense tends to refute the soundness of the contention that through government ownership savings would be effected that would result in a reduction of rates. The postmaster general reiterates his belief that a complete unification of the various wire systems should be brought about through government ownership and operation as a part of the postal establishment and declares that the present control affords no more a test of the virtues of government ownership than could be had through a temporary receivership in a court proceeding. The postmaster general has not changed his mind, he says, but as it is apparent that government ownership does not meet with the approbation of the new Congress there is but one course to pursue, which is to return the properties to their owners after urging proper legislation. It was announced that the President had approved of the proposed step.

Victory Loan Subscriptions

The Railroad Administration had received up to Wednesday the following reports regarding the progress of the Victory Loan among railroad employees:

The Northwestern region reported for the first eight days, out of a total of 251,783 employees, 128,936 or 51.21 per cent subscribed $12,244,650. As compared with the first eight days of the fourth liberty loan, this is a decrease of 53,894 subscribers and $6,537,300.

The Southern region reported for the first six days, out of a total of 243,500 employees, 41,771 or 18.75 per cent had subscribed $4,519,000, a decrease of $2,800,250 as compared with the fourth liberty loan.

The Lawrenceville Branch Railroad had subscribed 100 per cent to the Victory Loan on April 23, and the Cincinnati, Burnside & Cumberland River had subscribed 100 per cent on April 25.

The Southwestern region reported that up to and including

April 28, out of a total of 167,969 employees, 68,767 or 40.1 per cent had subscribed $6,751,700.

The Pocahontas region reported up to and including April 28, out of a total of 51,389 employees, 11,148 or 21.69 per cent had subscribed $1,076,000.

The Central Western region reported for the first eight days, out of a total of 304,960 employees, 159,904 or 52 per cent had subscribed $14,872,050, a decrease of $3,498,290 as compared with the fourth loan.

The Allegheny region reported up to and including April 28, out of a total of 382,545 employees, 135,337 or 35.37 per cent had subscribed $10,797,100.

The Eastern region reported up to and including April 28, out of a total of 334,995 employees, 151,320 or 43 per cent had subscribed $14,474,750.

L. S. Taylor, federal manager of the Pullman Car Lines, reported that up to and including April 29, out of a total of 21,065 employees, 10,489 or 50 per cent had subscribed a total of $848,100. H. S. Noble, federal manager of the New York-New Jersey Canal Sections, reported that the New York Canal Section had subscribed $3,000, and that out of a total of 34 employees, 22 of them had subscribed. E. R. Richardson, of the Coastwise Steamship Lines in New York, reported that the employees of those lines had subscribed a total of $83,600.

This makes a total of $65,669,950 subscribed to the Victory Loan by employees of the Railroad Administration.

Railway Regiments Return

The 13th Railway Engineers, recruited mainly from Chicago railroad men, arrived in New York on April 28, after service of a year and a half on French military railways. The history of the American Expeditionary Forces shows that this was the first American engineering regiment in France and the first American regiment of any kind to come under actual shell fire. Among the enviable records established by it in handling the strategic railways immediately behind the lines was the moving of 103 trainloads of men, ammunition, ordnance and supplies to the front lines during the Argonne drive within a period of 24 hours. Except for the men who died or were wounded in France and thirteen men who volunteered for service with the North Russian Transportation Corps Expeditionary Force and who are now on their way to Russia, the 13th Engineers returned complete. The regiment was in command of Colonel C. N. Whiting, formerly superintendent of the Chicago, Milwaukee & St. Paul at Butte, Mont. Colonel Whiting succeeded Colonel N. L. Howard, of Chicago, the son of E. A. Howard, vice-president of the Chicago, Burlington & Quincy and formerly division superintendent of the Chicago, Burlington & Quincy at Hannibal, Mo.

The 13th Engineers sailed for France on July 21, 1917, and spent 21 months and five days in service in the "zone of advance." The regiment was taken to France by Colonel William C. Lanfit, a regular army officer, who was succeeded soon after the regiment's arrival overseas by Colonel Kootz, who in turn was succeeded by Colonel Howard, who remained with the organization until after the signing of the armistice. All of the men, supplies, ammunition and ordnance supplied to the American troops in the St. Mihiel and Argonne drives were transported by the 13th Engineers, who in addition to their work in the Argonne drive built special spur tracks for the American naval guns which were used in that engagement.

Committees have been appointed from the Illinois Central, the Chicago & North Western, the Atchison, Topeka & Santa Fe, the Chicago, Rock Island & Pacific, the Chicago Great Western and the Chicago, Milwaukee & St. Paul—the six roads from which the 13th Engineers were recruited—to make plans for a great reception of the regiment at Chicago. These plans are in charge of W. L. Park, federal manager of the Chicago Great Western.

Plans are being made in St. Louis, Mo., for the reception of the 12th Regiment of Railway Engineers, recruited mainly in St. Louis and adjacent territory, which arrived in New York on April 26. The war department has given permission to the regiment to stop over in St. Louis on its way to Camp Funston, Kan., for demobilization. Colonel F. G. Jonah, chief engineer of the Katy-Frisco lines, will meet the organization in New York and accompany it to St. Louis, as the representative of the St. Louis Railway Club. The entertainment and reception in St. Louis will be sponsored by the Engineers' Club of St. Louis, the Ladies Auxiliary of the 12th Regiment and the St. Louis Railway Club.

Soldiers of the 117th, and the 18th engineer regiments also arrived in New York on Monday of this week. The 117th regiment was recruited mostly in North and South Carolina. These men built bridges between Luneville and Sedan. Many of the officers and men have decorations. This regiment saw severe service and lost 237 men killed. The 13th regiment lost only 13 men.

Exhibits at June Conventions

Secretary J. D. Conway, of the Railway Supply Manufacturers' Association, Oliver building, Pittsburgh, Pa., has advised us that by utilizing various odd spaces as well as the front porches on the Million Dollar Pier at Atlantic City, a total of 92,755 square feet of exhibit space has been obtained for the conventions of the Master Car Builders' and the Master Mechanics' Associations next June. This is 5,395 square feet in excess of the space assigned in 1913, that being the banner year for exhibits.

Through an error, two names were left off of the exhibit list which was published in the *Railway Age* of April 18: The Vapor Car Heating Company, Inc., Chicago, and Harry Vissering & Company, Inc., Chicago. Three changes should be made in the list as published. Gray & Davis, Inc., should be changed to Unit Railway Car Company, Boston; the Goodyear Tire & Rubber Company has withdrawn as an exhibitor, and the Southern Foundry & Machine Company should be shown as Southwark Foundry & Machine Company, Philadelphia.

The following names should also be added to the list of exhibitors:

Beatty Machine & Mfg. Co., Hammond, Ind.
Brewster, William, Company, New York.
Crucible Steel Co. of America, Pittsburgh, Pa.
Electric Controller & Mfg. Co., Cleveland, O.
Electro Dynamic Co., Bayonne, N. J.
Graver, William, Tank Works, Chicago.
Hanna, The, Locomotive Stoker Co., Cincinnati, O.
Kerite, The, Insulated Wire & Cable Co., New York.
Keyoke Railway Equipment Co., Chicago.
Liberty Mfg. Co., Pittsburgh, Pa.
Pratt & Whitney Co., New York.
Railway Devices Co., St. Louis, Mo.
Rogers' Journal Packing Co., Chicago.
Standard Railway Equipment Co., New Kensington, Pa.
Swind Machinery Co., Philadelphia, Pa.
Wilson Welder & Metals Co., Inc., New York.

June Signal Meeting

The next meeting of the Signal Division of the American Railroad Association (formerly the Railway Signal Association) will be held at "The Breakers," Atlantic City, N. J., on Thursday and Friday, June 26 and 27. The Journal of Proceedings, containing the reports of committees which will be dealt with at this meeting, is to be issued about June 7. Members are asked to make their reservations at the hotel at an early date. The rates at the hotel range from $3.00 a day, European plan, for a room without private bath, occupied by one person, to rooms with private bath, occupied by two persons, at $7 to $14; and, on the American plan, from $6 or $7 a day for room without private bath, occupied by one person, to $20 for a room with private bath occupied by two persons.

H. S. Balliet, secretary of the signal division, announces the removal of his headquarters, on May 15, from Bethlehem, Pa., to 75 Church street, New York City.

St. Louis Railway Club

On Tuesday evening of this week the St. Louis Railway Club listened to a paper by Carl R. Gray, former director of the division of operation of the United States Railroad Administration, on the operation of the railroads by the government under war conditions, in which he dwelt particularly on his experiences in the early days of federal control. The paper was discussed by B. F. Bush, regional director, and others.

Air Brake Association Convention

The 26th annual convention of the Air Brake Association will be held at the Hotel Sherman, Chicago, on May 6. The Railroad Administration has requested regional directors to send as many as possible of their air brake men to this meeting, and the attendance is expected to be greater than at any previous convention.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION.—F. M. Nellis, 165 Broadway, New York City. Next convention, May 6-8, 1919, Chicago.

AMERICAN ASSOCIATION OF DEMURRAGE OFFICERS.—F. A. Pontious, Supervisor of Demurrage and Storage, C. & N. W. Ry., Chicago.

AMERICAN ASSOCIATION OF DINING CAR SUPERINTENDENTS.—E. H. Thayer, St. Louis-San Francisco R. R., St. Louis, Mo.

AMERICAN ASSOCIATION OF FREIGHT AGENTS.—R. O. Wells, Illinois Central, Chicago. Next meeting, June 17-20, Cleveland, Ohio.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—J. E. Quick, Port Huron, Mich.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—J. Rothschild, Union Station, St. Louis, Mo.

AMERICAN ELECTRIC RAILWAY ASSOCIATION.—E. B. Burritt, 8 W. 40th St., New York.

AMERICAN ELECTRIC RAILWAY MANUFACTURERS' ASSOCIATION.—F. C. J. Dell, 50 E. 42nd St., New York.

AMERICAN RAILROAD MASTER TINNERS', COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.—Otto E. Schlinck, 485 W. 5th St., Peru, Ind. Next convention, June 2-5, Marquette Hotel, St. Louir, Mo.

AMERICAN RAILROAD ASSOCIATION.—J. E. Fairbanks, 75 Church St., New York.—

- Operating Section (including former activities of Association of Railway Telegraph Superintendents and Railway Storekeepers' Association).
- Engineering Section (including former activities of Railway Signal Association).
- Mechanical Section (including former activities of Master Car Builders' and Master Mechanics' Association).
- Traffic Section (including former activities of Freight Claim Association).
- Transportation Section (including former activities of Association of Transportation and Car Accounting Officers).

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave. Austin Station, Chicago. Next convention, October 21-23, 1919, Cleveland, O.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—E. H. Fritch, 910 Michigan Ave., Chicago.

AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION (see American Railroad Association, Mechanical Section).—Acting Secretary, V. R. Hawthorne, 735 Transportation Bldg., Chicago. Next annual convention, June 23-25, 1919, Atlantic City, N. J.

AMERICAN RAILWAY PERISHABLE FREIGHT ASSOCIATION.—E. F. McPike, 135 E. 11th Place, Chicago. Regular meetings, 2d Wednesday in March and September.

AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—R. D. Fletcher, 6202 Greenwood Ave., Chicago. Next convention, August 27-29, Hotel Sherman, Chicago.

AMERICAN SOCIETY FOR TESTING MATERIALS.—C. L. Warwick, University of Pennsylvania, Philadelphia, Pa. Next meeting, June, 1919, Atlantic City, N. J.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—Charles W. Hunt, 220 W. 57th St., New York. Regular meetings, 1st and 3d Wednesday in month, except July and August, 220 W. 57th St., New York. Next annual convention, June 17-20, Hotel Radisson, Minneapolis, Minn.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—T. F. Whittelsey, 708 Union Trust Bldg., Washington, D. C.

AMERICAN TRAIN DESPATCHERS' ASSOCIATION.—D. L. Darling, Northern Pacific Ry., Spokane, Wash. Next convention, June 17-20, Hotel La Salle, Chicago.

AMERICAN WOOD PRESERVERS' ASSOCIATION.—F. J. Angier, B. & O., Mt. Royal Sta., Baltimore, Md.

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS.—George W. Lyndon, 1214 McCormick Bldg., Chicago. Semi-annual meeting with Master Car Builders' Association.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—Willis H. Failing, C. R. R. of N. J., Jersey City, N. J.

ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W., Room 411, C. & N. W. Sta., Chicago. Next meeting, October, 1919, Chicago.

ASSOCIATION OF RAILWAY TELEGRAPH SUPERINTENDENTS (see American Railroad Association, Operating Section).—W. L. Connelly, N. Y. C. R. R., Gibson, Ind.

ASSOCIATION OF TRANSPORTATION AND CAR ACCOUNTING OFFICERS (see American Railroad Association, Transportation Section.)—G. P. Conard, 75 Church St., New York.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—M. J. Trees, Chicago, Bridge & Iron Company, Chicago. Next annual convention, October 21-23, 1919, Cleveland, O.

CANADIAN RAILWAY CLUB.—James Powell, 46 Aberdeen Ave., St. Lambert (near Montreal), Que. Next meeting, 2d Tuesday in May, 1919, Windsor Hotel, Montreal, Que.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 841 Lawler Ave., Chicago. Regular meetings, 2d Monday in month, except June, July and August, New Morrison Hotel, Chicago.

CENTRAL RAILWAY CLUB.—Harry D. Vought, 95 Liberty St., New York, Regular meetings, 2d Thursday in November, and 2d Friday in January, March, May and September, Hotel Statler, Buffalo, N. Y.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S ASSOCIATION.—W. R. McMunn, New York Central, New York.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S SUPPLY MEN'S ASSOCIATION.—D. B. Wright, Lehon Company, 45th and Oakley Sts., Chicago.

EASTERN RAILROAD ASSOCIATION.—D. G. Stuart, Washington, D. C. Next annual meeting, May 8, 1919, Railroad Club, New York.

FREIGHT CLAIM ASSOCIATION (see American Railroad Association, Traffic Section).—Lewis Pilcher, R. F. & P., Richmond, Va.

GENERAL SUPERINTENDENTS' ASSOCIATION OF CHICAGO.—A. M. Hunter, 321 Grand Central Sta., Chicago. Regular meetings, Wednesday preceding 3d Friday in month, Room 856, Insurance Exchange Bldg., Chicago.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—A. L. Woodworth, B. & O., Lima, Ohio. Next convention, August 19-21, Hotel Sherman, Chicago.

INTERNATIONAL RAILWAY FUEL ASSOCIATION.—J. G. Crawford, 702 E. 51st St., Chicago. Next meeting, May 19-22, 1919, Hotel Sherman, Chicago.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabasha Ave., Winona, Minn. Next convention September 2-5, 1919, Hotel Sherman, Chicago.

MAINTENANCE OF WAY AND MASTER PAINTERS' ASSOCIATION.—F. W. Hager, 1323 Hurley Ave., Ft. Worth, Tex. Next annual convention, October 21-23, 1919, St. Louis, Mo.

MASTER BOILER MAKERS' ASSOCIATION.—Harry D. Vought, 95 Liberty St., New York. Next meeting, May 26-29, 1919, Hotel Sherman, Chicago.

MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION OF THE UNITED STATES AND CANADA.—A. P. Dane, B. & M., Reading, Mass. Next meeting, September, 1919, Chicago.

MASTER CAR BUILDERS' ASSOCIATION (see American Railroad Association, Mechanical Section).—Acting Secretary, V. R. Hawthorne, 746 Transportation Bldg., Chicago. Next annual meeting, June 18-21, Atlantic City, N. J.

NATIONAL ASSOCIATION OF RAILWAY AND UTILITIES' COMMISSIONERS.—James B. Walker, 49 Lafayette St., New York. Next annual convention, October 14, 1919, Indianapolis, Ind.

NATIONAL FOREIGN TRADE COUNCIL.—O. K. Davis, 1 Hanover Square, New York.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, Kelly-Derby Co., Peoples Gas Bldg., Chicago.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, 2d Tuesday in month, excepting months of June, July, August and September.

NEW YORK RAILROAD CLUB.—Harry D. Vought, 95 Liberty St., New York. Regular meeting, 3d Friday in month, except June, July and August, 29 W. 39th St., New York.

NIAGARA FRONTIER CAR MEN'S ASSOCIATION.—George A. J. Hochgrebe, 623 Brisbane Bldg., Buffalo, N. Y. Regular meetings, 3d Tuesday in each month, Tenjost Hall, Buffalo, N. Y.

PACIFIC RAILWAY CLUB.—W. S. Wollner, 64 Pine St., San Francisco, Cal.

RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.—E. R. Woodson, 1116 Woodward Bldg., Washington, D. C. Next annual meeting, June 11, 1919, Hotel Commodore, New York.

RAILWAY BUSINESS ASSOCIATION.—Frank W. Noxon, 30 Church St., New York.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in month except June, July and August, Colonial Annex Hotel, Pittsburgh, Pa.

RAILWAY DEVELOPMENT ASSOCIATION.—D. C. Welty, Missouri Pacific R. R., St. Louis, Mo.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. Scribner, General Electric Co., Chicago. Annual meeting with Association of Railway Electrical Engineers.

RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.—D. L. Eubank, Galena Signal Oil Company, Richmond, Va. Next annual meeting, September, 1919, Hotel Sherman, Chicago.

RAILWAY FIRE PROTECTION ASSOCIATION.—G. L. Ball, St. Louis-San Francisco Ry., St. Louis, Mo.

RAILWAY REAL ESTATE ASSOCIATION.—James P. Nelson, President, C. & O., Richmond, Va.

RAILWAY SIGNAL ASSOCIATION (American Railroad Association, Engineering Section, Signal Division, H. S. Balliet, Bethlehem, Pa.; after May 15, 75 Church St., New York. Stated meeting, on Monday, before 3d Tuesday in March, Chicago.

RAILWAY STOREKEEPERS' ASSOCIATION.—J. P. Murphy, N. Y. C. R. R., Box C, Collinwood, Ohio.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Next annual meeting, June 18-25, 1919, Atlantic City, N. J.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Co., 30 Church St., New York.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—P. J. McAndrews, C. & N. W. Ry., Sterling, Ill. Next annual convention, September 16-18, 1919, Chicago.

ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2d Friday in month, except June, July and August.

SIGNAL APPLIANCE ASSOCIATION.—F. W. Edmunds, West Nyack, Rockland County, New York.

SOCIETY OF RAILWAY FINANCIAL OFFICERS.—L. W. Cox, 1217 Commercial Trust Bldg., Philadelphia, Pa.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. J. Merrill, P. O. Box 1205, Atlanta, Ga. Regular meetings 3d Thursday in January, March, May, July, September and November, Piedmont Hotel, Atlanta.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—E. W. Sandwich, Western Ry., of Ala., Atlanta, Ga.

SUPPLY ASSOCIATION OF AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—C. N. Thulin, Duff Manufacturing Company, 935 Peoples Gas Bldg., Chicago.

TRACK SUPPLY ASSOCIATION.—W. C. Kidd, Ramapo Iron Works, Hillburn, N. Y. Next annual convention, September 16-18, 1919, Auditorium Hotel, Chicago.

TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, N. Y. C. R. R., Cleveland, O. Next annual meeting, September, 1919, Hotel Sherman, Chicago.

WESTERN ASSOCIATION OF SHORT LINE RAILROADS.—Clarence M. Oddie, Mills Bldg., San Francisco.

WESTERN RAILWAY CLUB.—A. F. Steubing, 750 Transportation Bldg., Chicago. Regular meetings 3d Monday in month, except June, July and August.

WESTERN SOCIETY OF ENGINEERS.—Edgar S. Nethercut, 1735 Monadnock Block, Chicago. Regular meetings, 1st Monday in month, except July and August.

Traffic News

Grain loading on railroads under federal control up to April 19 this year has amounted to 330,800 car loads as compared with 342,964 in the corresponding period of last year.

F. M. Renshaw, assistant manager of the traffic department of the Cincinnati (Ohio) Chamber of Commerce, has been promoted to acting manager of the traffic department, to succeed Guy M. Freer, who recently resigned to take a position with the Central Coal Association.

A milling and grain division has been organized in the Traffic Club of Minneapolis to co-operate in the adjustment of traffic problems and to protect grain and milling interests. The officers of the division are: President, Otto Mortenson, Cargill Elevator Company; vice-president, E. C. Best, Washburn-Crosby Company; secretary-treasurer, J. H. Mashek, of the F. R. Milling Company.

The Farmers' Educational and Co-operative Union, at a recent convention held in Denver, Colo., passed resolutions asking Congress to grant a storage fee of two cents a bushel to farmers who store their own wheat and calling for the placing of an embargo on Oriental vegetable oil. Contrary to reports, no resolutions were passed at this convention concerning the solution of the present railroad problem.

The directors of the Texas Industrial Traffic League have announced their opposition to the efforts being made by New Orleans interests to obtain government ownership and private operation of all boats of the United States. They further declared themselves heartily in favor of the plan advocated by Chairman Hurley of the Shipping Board providing for private ownership and operation of the boats subject to the jurisdiction of the United States Shipping Board.

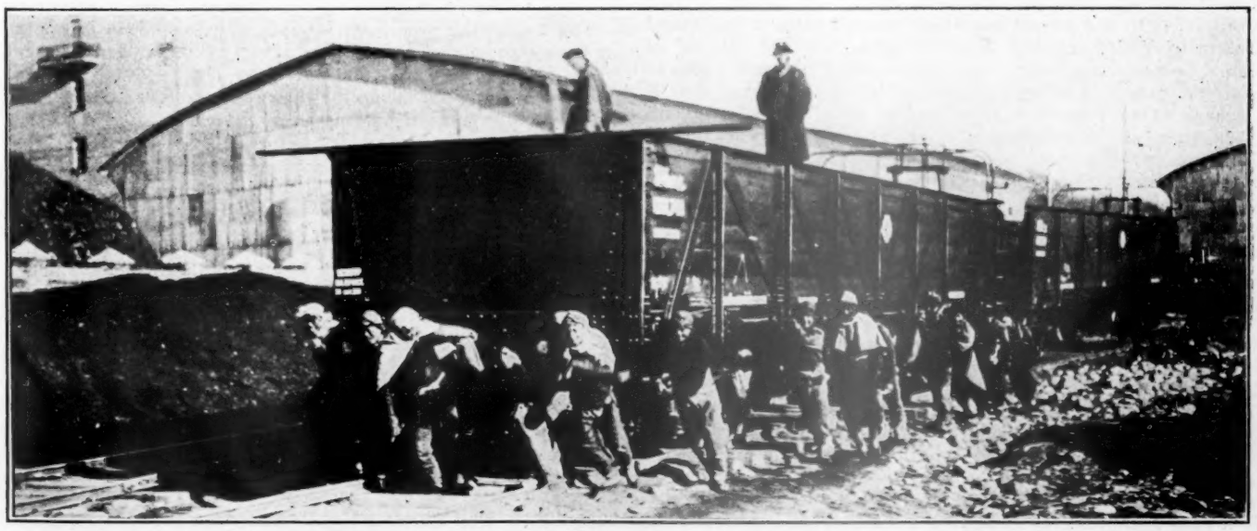
Producers of crude oil in Texas have formed the Texas Petroleum Refiners' Association for the purpose of obtaining favorable freight rates for the Texas industry. E. P. Byars, traffic manager of the Fort Worth (Tex.) Freight Bureau, is to be counsel of the new organization. A. J. Scrivner, assistant traffic manager of the Fort Worth Freight Bureau, will assist Mr. Byars as secretary-traffic manager of the new organization. M. A. Bundy, Wichita Falls, Tex., has been elected president and J. K. Gilgour, also of Wichita Falls, has been elected vice-president of the association.

In Arkansas the widespread use of automobiles has reduced the passenger traffic on some branch railroads by about fifty per cent. This statement was made by B. F. Bush, regional director, in a plea before the Texas State Railroad Commission against the proposed order to reinstate certain passenger trains on some of the railroads. He said that the automobile traffic has cut into the railroad passenger earnings severely. The traffic on the main lines as well as on branches has been seriously affected. While the figures for Texas have not yet been compiled, it is estimated that the showing will be fully as great as in Arkansas, so far as reduction of passenger traffic on branch lines is concerned. With the building of good highways and the restoration of business to normal the number of automobiles and the extent of their use for long distance travel will increase.

The New Orleans (La.) Joint Traffic Bureau, an organization of which the constituent bodies are the local Board of Trade, the Cotton Exchange, the Association of Commerce, the Board of Commissioners and the Public Belt Railway, has started a "campaign" against the recent action of the Chicago Passenger Traffic Committee, which eliminates optional routing by way of New Orleans on passenger traffic from Chicago, St. Louis, and Memphis, to points in California. The Bureau says that the route by way of New Orleans has been used extensively in the past, that the stopover privilege has been of benefit to New Orleans, and that under the action proposed a trip by way of that city would cost $18 more from Chicago and $10 more when from Memphis. The Bureau further maintains that since the Railroad Administration did not see fit to eliminate this routing even during the war, there is no necessity to make the change now. Protests have been sent to Max Thelen, director of the Division of Public Service.

Business Men's Association vs. Chamber of Commerce

The Shore Chamber of Commerce, Atlantic City, N. J., as reported in a Philadelphia paper, has "sounded the knell" of $1 excursions from Philadelphia to Atlantic City the coming summer by declining to join in a movement started by the Fourth Ward Business Men's Association to get a reduction of the rate from $1.25 and war tax. The Chamber of Commerce has issued a statement saying: "Considering the marked increase in the expense of operating railroads, we do not see on what grounds the increase of twenty-five cents was criticized. It was only by exerting influence from every angle that we were able to have it reduced last summer from the $1.79 rate then prevailing. It would be beneficial to Atlantic City if the further reduction were possible, but we do not think the time is ripe to even ask for it."



Photograph by Press Illustrating Service, Inc., N. Y.

Moving an American Made Car in Yards at Vladivostok, Siberia. Man Power is Cheap with Korean Laborers

Commission and Court News

Interstate Commerce Commission

The Commission has appointed a board of referees, in accordance with the provisions of the federal control law, to determine the just compensation of the Boston, Cape Cod & New York Canal Company, for the use of its canal under government control. The board will consist of J. B. Eastman, commissioner; J. J. Hickey, chief of the bureau of inquiry, and A. G. Hagarty, examiner attorney.

The Commission has received a petition from Director General Hines, asking that the "Michigan percentage cases" be reopened, as there are now pending against the director general complaints filed by various Indiana and Ohio cities attacking their percentage bases, resulting from the commission's decision in this case. It was held by the commission that rates between eastern trunk line territory and certain Michigan communities were so constructed as to give undue preference to cities in Ohio and Indiana, and to Detroit. Rates then put into effect have lately been declared to be discriminatory as against North Bend, Elkhart, Mishawaka, Goshen and Napanee, Ind. The only way to remove the discrimination resulting from the obedience of the carriers to the commission's order, Director General Hines states, is to change the bases now in effect, on which the rate structure in Michigan is built. He further avers that the South Bend case, the first to come up, is of greatest importance to the government in relation to its management of the railroads, in that a decision adverse to the government would be disastrous to the revenues and to the historical percentage structure of rates between eastern trunk line and Central Freight Association territory.

In Natchez Chamber of Commerce v. Aransas Harbor Terminal Railway Company et al., the commission finds that: Class rates between Natchez, Miss., and Texas points are unreasonable and unduly prejudicial to the extent that they exceed rates between Shreveport, La., and Texas points. Class rates between Natchez and Houston-Galveston group are found unduly prejudicial in so far as they exceed rates between Shreveport and Texas points in common-point territory. Carload rates on cattle, horses, and mules from Texas points to Natchez are found unduly prejudicial to the extent that they exceed, for distances of 750 miles or less, the rates from Texas points to Shreveport, and, for distances greater than 750 miles, the rates from the same points to Shreveport by more than 6 cents per 100 lb. Carload rates on salt from Grand Saline, Tex., to Natchez, Miss., are found unduly prejudicial to the extent that they exceed rates from Grand Saline to Vicksburg and New Orleans. Carload rate of 23 cents on cement plaster from Acme and Plasterco, Tex., to Natchez found to be unduly prejudicial to the extent that it exceeds rates from the same points to New Orleans and Vicksburg, and unreasonable to the extent that it exceeded 18 cents per 100 lb. prior to June 25, 1918, and subsequent to that date to the extent that it exceeded and exceeds 20 cents per 100 lb. Portions of fourth-section applications of defendants are denied.

Commission Prescribes Tap Line Divisions

By an order entered on July 29, 1914, the commission fixed the maxima of allowances or divisions out of the rates of interstate shipments of lumber and forest products that may be received by the tap lines involved in its investigation. The general rate advance ordered by the director general last June increased the rates on lumber and forest products 25 per cent, no increase to be more than 5 cents per 100 lb. The commission has now ordered that after June 1 the divisions which may be paid to tap lines shall not exceed the following amounts: for switching a distance of 1 mile or less from the junction, $2.50 per car; over 1 mile and up to 3 miles from the junction, $3.50 per car; on shipments from points over 3 miles and not more than 6 miles from the junction, 2 cents per 100 lb.; over 6 miles and not more than 10 miles from the junction, 2½ cents per 100 lb.; over 10 miles and not more than 20 miles from the junction, 3 cents per 100 lb.; over 20 miles and not more than 30 miles from the junction, 3½ cents per 100 lb.; over 30 miles and not more than 40 miles from the junction, 4 cents per 100 lb.; over 40 miles from the junction, 4½ cents per 100 lb. These divisions are to be the net amounts that may be paid out of the trunk line rates from the junction, and when the rates from points on the tap lines are made by the addition of an arbitrary, the amount of such arbitrary shall accrue to the tap line.

Valuation Order No. 3

The commission has issued a second revision of valuation order No. 3, containing the regulations and instructions to govern the recording and reporting of all extensions and improvements or other changes in physical property of common carriers, for the purpose of keeping its valuation records up to date in accordance with Section 19-a of the act to regulate commerce. The order is effective as of January 1, 1919.

Report in Bill of Lading Case—New Forms Prescribed

The Interstate Commerce Commission has issued a report in the so-called bill of lading case, written by Commissioner Woolley. It deals comprehensively and generally with the entire subject and consists of three sections, one dealing with the general merchandise domestic bill, another with the export bill, and a third with the live stock bill; but the section on the live stock bill is reserved for disposition in a supplemental report. The report does not deal with the question of negotiability, that having been taken care of by the so-called Pomerene act. It discusses the fundamentals and history of the common law of the carrier's liability and exemptions tracing the development of the law in this country down to the time when Congress enacted legislation imposing certain specific duties upon carriers and making unlawful some of the exemptions and limitations of liability theretofore existing.

The commission holds that it has authority to enforce the provisions of the statutory law in respect to the issuance of bills of lading. It rules on the lawfulness and reasonableness of many of the time-honored terms and conditions, and interprets the Cummins amendment.

The long-standing provision that the measure of the carrier's liability shall be computed on the basis of the value of the property at time and place of shipment is in contravention of the Cummins amendment and is required to be stricken from the domestic bill, but the similar provision is retained in the export bill, the Cummins amendment being held not applicable to traffic destined to non-adjacent foreign countries.

The use of the new form is made compulsory in interstate and foreign commerce from August 8, next. The present order is dated April 14, and the case (No. 4844) originated on December 7, 1918; but the discussion covers various matters which have been before the Commission for seven years past.

State Commissions

The New York State Public Service Commission, First District, holds that a railroad has no right to inconvenience its patrons by cutting off a service which it has contracted to give merely because that service no longer happens to be profitable. This is in an opinion by Commissioner F. J. H. Kracke, disallowing an application of the Long Island Railroad for permission to discontinue passenger service on its Bushwick branch. The railroad line referred to is single-track, and is largely used for freight service. The company desires to use the branch altogether for freight, and is willing to provide transfers to an adjacent street railway. This plan, however, was not acceptable to the Bushwick Branch passengers, who protested against the proposed discontinuance of service. It is held that merely because the passenger service was unprofitable and the company desired to use the

tracks for a more profitable form of traffic was not a good reason for depriving the passengers of service to which they were accustomed.

Louisiana Commission Demands Service

The condition of the roadway, equipment and service of the Louisiana Railway & Navigation Company has resulted in the issuance of three orders by the Railroad Commission of Louisiana demanding a betterment of the existing conditions. The first of these orders requires the company thoroughly to repair its entire roadbed including cross ties, rails, bridges, switches, frogs and trestles and to provide a sufficient number of locomotives and other equipment to afford adequate freight and passenger service. The representatives of the carrier did not question the charges made but pleaded the weak financial condition of the company and inability to secure necessary materials. William Edenborn, president of the company, declared that during 1917 and 1918 the road was unable to obtain sufficient ties. Also the unprecedented labor shortage and the excessiv rainfall contributed to the road's troubles. Mr. Edenborn said that repair work was being done on the roadbed as rapidly as possible and that conditions would soon again be normal. A second order requires the payment to the state of Louisiana of a fine of $300 for violation of the commission's rule which requires that coaches be in a clean and sanitary condition. A third order imposes a fine of $300 for violation of the rule relative to heating coaches.

Court News

Liability for Loss Under Cummins Amendment

The district court for the district of Minnesota holds that, under the Cummins Amendment, declaring that carriers shall be liable for the full actual loss caused by them notwithstanding any limitation of liability, a common carrier, where wheat was lost in transit, is liable for its value at the point of destination, notwithstanding the shipment was made under a uniform bill of lading, which was part of the public tariff filed with the Interstate Commerce Commission, and which provided that the loss should be computed on the value of the property at the time and place of shipment. Conceding, as has been suggested by the commission, that this conclusion will result in difficulties and confusion in existing rules and regulations and tariffs, and possibly hardship and injustice to the carriers, and possibly in some discrimination amongst shippers, the court said the remedy is to be found in facing the law squarely and revising and reconstructing those rules and regulations to meet it.—McCaull-Dinsmore Co. v. C. M. & St. P., 252 Fed. 664. Decided August 23, 1918.

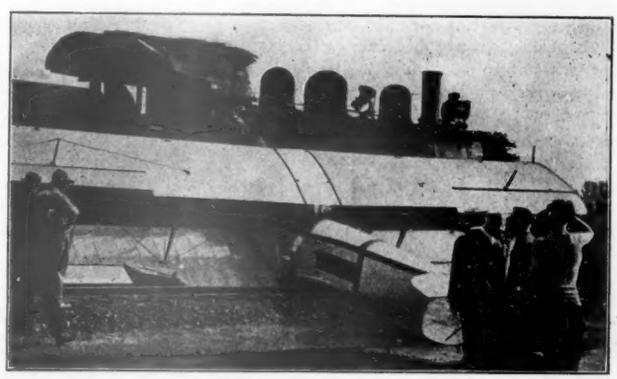
United States Supreme Court

Federal Employers' Liability and Locomotive Inspection Acts

A fireman on the New Orleans & N. E. was injured by being thrown down between the engine and the tender. The accident was caused by the uncoupling of engine and tender; and this was apparently due to the breaking of the king pin and the coupling chains. He brought suit in a state court of Mississippi, under the Federal Employers' Liability Act and the Boiler Inspection Act of 1911, and recovered judgment, which was affirmed by the Supreme Court of the state (115 Miss. 285). The railroad took the case to the United States Supreme Court, contending that the state Supreme Court erred in sustaining the action of the trial court, which charged the jury that the so-called "Prima Facie Act" of Mississippi applied, and that it relieved the plaintiff of the burden of proof to establish negligence. The plaintiff then conceded that that statute cannot be constitutionally applied to suits under the Federal Employers' Liability Act, since the United States Supreme Court has so decided in N. O. & N. E. v. Harris, 247 U. S. 367, and that the judgment must be reversed if the railroad's rights were prejudiced by this error. But he contended that the railroad was not prejudiced, because negligence on its part was not essential to recovery. He insisted that the Boiler Inspection Act, as amended, imposes upon the railroad the absolute duty to have the locomotive and tender and all parts and appurtenances thereof in proper condition and safe to operate; that the mere breaking of the king pin and coupling chains showed conclusively that they were defective; that the evidence showed conclusively that this breakage was the proximate cause of the injury; and that the plaintiff was therefore entitled, under the Federal act to have the jury peremptorily instructed to render a verdict in his favor. This contention was apparently not considered by the State Supreme Court. The United States Supreme Court holds that the evidence did not establish as a matter of law that the king pin or the chains were defective. At most it presented a question for the jury. The court could not therefore say that the railroad was not prejudiced by the error of the trial court in instructing the jury that the "Prima Facie Act" was applicable, and it reversed the judgment.—New Orleans v. Scarlet. Decided April 21, 1919. A similar decision was made the same day in the case of Yazoo & Mississippi Valley v. Mullins.

Cost of Industry Tracks

An order of the Minnesota Railroad and Warehouse Commission, requiring the Chicago & N. W. to alter and extend a side track leading from its main line to an adjacent brick making plant, made under a local statute, practically assigned two-thirds of the cost to the railroad and one-third to the owner of the plant. The railroad objected to bearing any part of the cost and the plant owner was not willing to bear all. The state Supreme Court sustained the order as reasonable. (135 Minn., 323.) The Untied States Supreme Court affirms the judgment, holding that the enforced discharge of the duty to provide the facility did not amount to a taking of property without compensation merely because it was attended with some expense, since the expenditure was for property which will belong to the company and be employed in its business. The court said in part: "Of course, the expense is an important element to be considered in determining whether the requirement is within the bounds of reasonable regulation or is essentially arbitrary, but it is not the only one. The nature and volume of the business to be affected, the revenue to be derived from it, the character of the facility required, the need for it and the advantage to be realized by shippers and the public are also to be considered. Tested by these criteria we think the order in question is not arbitrary, but reasonable." The yearly freight charge on the traffic of the existing side track to the plant had exceeded $10,000, which the output over the new track would double. The estimated cost of the work was about $2,300.—Chicago & N. W. v. Ochs. Decided April 14, 1919. A similar ruling was made the same day in the case of Lake Erie & Western v. State Public Utilities Commission of Illinois, regarding a side track in Illinois.



Photograph by Underwood & Underwood, N. Y.

Airplane Forced to Descend Because of Dead Engine, Crashes Into Locomotive Near Seaside, Toronto

Equipment and Supplies

Locomotive Deliveries for Week Ended April 19

The following locomotives were shipped to roads under federal control during the week ended April 19:

Works	Road	Number	Type
American	C. M. & St. P.	12	USRA Mikado
	N. Y., N. H. & H.	6	USRA L. Mount
	Maine Central	2	USRA 6W. Sw.
	Penn. L. W.	6	USRA St. F.
	A. C. L.	3	USRA 6W. Sw.
		29	
Baldwin	Ill. Cent.	1	Mikado
	A. T. & S. F.	3	Mikado
	C. B. & Q.	6	USRA Mikado
	C. B. & Q.	1	Mikado
	L. V.	1	Pacific
	A. T. & S. F.	1	Mountain
	T. & P.	2	Pacific
		15	
Total		44	

Cars Accepted Week Ended April 19

The following new standard cars were accepted during the week ended April 19:

Road	Number	Type	Manufacturer	Total accepted for given roads
Sou. Pac.	23	50 Ton S. S. Box	Haskell & Barker	500
P. McK. & Y.	99	70 Ton L. S. Gon.	Pressed St. Car	306
Total	122			

Freight Cars

THE BIDDLE PURCHASING COMPANY, Pittsburgh, Pa., is inquiring for one small lever hand car.

THE WENDNAGLE COMPANY, Chicago, is inquiring for one 80,000-lb. capacity 40 or 42-ft. flat car.

THE AIKEN GASOLINE COMPANY, Tulsa, Okla., has ordered 10 40-ton, 8,000-gal. tank cars from the American Car & Foundry Company.

THE LIBERTY STEEL PRODUCTS COMPANY, INC., has recently placed orders for 200 flat cars and 200 tank cars to be shipped to France for private operators. These cars are to be made in accordance with the French State Railway and Paris & Orleans standards.

CAR WHEELS AND AXLES FOR NORWAY. Commerce reports in its issue of April 16 contains the following trade opportunity: 29,125—An officer of the department of public works in a city of Norway desires to purchase car wheels and axles complete, to be used in the construction of railway cars. Quotations should be given f. o. b. New York. Terms, payment against documents. Further information may be obtained from the Bureau of Foreign and Domestic Commerce or from any of its district and co-operative offices.

Signaling

THE LEHIGH VALLEY has ordered from the General Railway Signal Company a 24-lever interlocking for Weatherly, Pa.

THE NEW YORK CENTRAL has ordered from the General Railway Signal Company a mechanical interlocking, twelve levers, for Military Road, Buffalo, N. Y.

CANADIAN PACIFIC.—This company plans this year to install automatic signals between Gault, Ont., and Woodstock, 30 miles; also to renew interlocking plants at Walkerton, Ont., and Saskatoon, Sask. A new copper telegraph wire is to be put up from Halifax, N. S., to Winnipeg, Man., and from Toronto, Ont., to Windsor.

Supply Trade News

The **Southern Railway Car Company** has been organized at Wichita Falls, Texas, with **James A. Jones** as president, to make tank cars, railway cars, and street cars; also to operate repair shops.

The Booth-Hall Company, designers and builders of electric furnaces, has removed its executive and sales offices from 2307-15 Archer avenue, Chicago, to the Hearst building, 326 West Madison street.

John Walsh, counsel for the Federal Trade Commission since its organization, and its chief counsel for the past year and a half, has resigned and has opened an office in the Southern building, Washington, D. C., for the general practice of law.

Henry M. Sperry, publicity representative at New York of the **Union Switch & Signal Company,** the **General Railway Signal Company,** the **Federal Signal Company** and the **Hall Switch & Signal Company,** has removed his office from 120 Broadway to 347 Madison avenue.

Frank J. Tone has been elected president of the Carborundum Company, Niagara Falls, N. Y., in place of **F. W. Haskell,** deceased, and **George R. Rayner,** secretary, has been elected vice-president in place of **R. B. Mellon** of Pittsburgh. **F. H. Manley** retains the office of treasurer.

C. D. Barrett, who has just returned from France after 18 months' service as an officer in the Transportation Corps of the American Expeditionary Force, has been appointed district engineer of the **Locomotive Stoker Company,** with headquarters at New York. He was born in Fort Wayne, Indiana, and after graduation from Purdue University in 1901, he entered the service of the Pennsylvania Railroad as a special apprentice at Altoona. He remained with the Pennsylvania in the positions of motive power inspector, foreman, assistant master mechanic, assistant engineer of motive power and master mechanic until the summer of 1917. He then received a commission as major in the United States Army and went to France in command of the First Battalion of the Nineteenth Engineers. In France Major Barrett organized the St. Nazaire locomotive erecting shop, where all the locomotives used by the A. E. F. were erected. He remained in charge of this shop until July, 1918, when he was appointed assistant general superintendent of motive power in the Transportation Department.

C. D. Barrett

Frank J. Lepreau has been appointed sales manager of the railway signal division of the **Macbeth-Evans Glass Company,** Pittsburgh, Pa. Mr. Lepreau resigned on April 1 as vice-president and general sales manager of the primary battery division of Thomas A. Edison, Inc.

T. W. Holt, superintendent of shops of the Pressed Steel Car Company, Pittsburgh, Pa., who had entire charge of the munition work undertaken by that company, has resigned to accept the position of assistant general manager of the **Curtain Supply Company,** Chicago, succeeding the late **R. S. Reynolds.**

G. E. Scott, who for the past year and a half has been in the service of the American Red Cross as assistant general manager at Washington, D. C., and from September, 1918, as general manager, has received his honorable discharge and resumed his duties as first vice-president of the **American Steel Foundries,** Chicago.

J. E. Mason has been appointed manager of field sales of the **Blaw-Knox Company,** Pittsburgh, Pa., with offices at Pittsburgh. In this capacity, Mr. Mason will supervise the operation of a sales agency plan throughout the country. Mr. Mason is a graduate of Purdue University and for the past four years has been in the employ of the McGraw-Hill Publishing Company, Inc., New York.

The Bailey Meter Company removed its main office and works from Boston, Mass., to Cleveland, Ohio, on May 1. The Boston office, with H. D. Fisher as manager, is retained to handle sales and engineering service work in the New England district. For the present the New York and Philadelphia districts will be covered from Boston and all other districts will be covered from Cleveland.

James Viles, chairman of the board of directors of the **Buda Company,** Chicago, died Sunday evening, April 27, at the St. Lukes Hospital, Chicago. He was born in Boston, Mass., on March 10, 1855, and received his education in the public schools of Cambridge, Mass., and a private school at Waltham, Mass. He began his business career in 1878 with the firm of Underwood & Company, packers, which was succeeded by the firm of Viles & Robbins, of which Mr. Viles was senior partner. Later he became president of the Omaha Packing Company, Omaha, Neb., from which position he retired in 1902 to engage in the railway supply business with the Buda Company. In 1907 he was elected president of the Buda Company, in which capacity he served until the early part of 1919, at which time he was elected chairman of the board of directors.

J. Viles

The Chicago Pneumatic Tool Company announces the election of **Allan E. Goodhue** as managing director of its English subsidiary, the **Consolidated Pneumatic Tool Company, Ltd.,** whose offices are at 170 Piccadilly, London, and whose plant is in Fraserburg, Scotland. Mr. Goodhue will also have charge of European sales for the Chicago Pneumatic Tool Company. He was for a number of years connected with the sales department of the Midvale Steel Company and Midvale Steel & Ordnance Company in Philadelphia, Chicago and Boston, leaving that company in March, 1918, to enter the service of the government. From that time until January 1, 1919, when he became connected with the Chicago Pneumatic Tool Company, he was assistant manager of the Steel and Raw Material Section, Production Division, of the Emergency Fleet Corporation. Mr. Goodhue will sail for England May 13 on the Mauretania.

Lewis A. Nichols, consulting engineer and president of the **Chicago Steel Tape Company,** Chicago, died on March 5, at his home in Chicago. He was born on August 26, 1851, in Florence, Italy, of American parents and came to this country in July, 1857, settling in Danvers, Mass. He was graduated from the Massachusetts Agricultural College at Amherst in 1871. Later during the same years he was engaged in laying out an addition to the city of Fall River, Mass., after which he was employed as leveler in a locating party on the Massachusetts Central. In the spring of 1872 he was given charge of the locating party finishing the construction of a division of that railroad in the fall of 1873. In 1875 he was elected to the position of city engineer of Chelsea, Mass., from which position he resigned in 1877 to engage in railroad surveys and construction work in many parts of this country and Mexico. He gave up the active practice of his profession in 1908, except as a consulting engineer, and since then has devoted most of his time to the interests of the Chicago Steel Tape Company.

Colorado Brake Shoe and Foundry Company

The Colorado Brake Shoe & Foundry Company, Denver, Colo., was organized on January 1, 1919, by **James C. Dolan,** representative of a number of railway and mine equipment and supply firms at Denver, Colo. Mr. Dolan, in addition to assuming the presidency of the new company will retain his connection with the companies with whom he has been engaged for the past six years. Previous to this he was in the employ of the purchasing department of the Denver & Rio Grande for nine years.

J. C. Dolan

F. T. Dickinson, general manager of the new company was formerly superintendent of the Railway Material Company's plant at Toledo, Ohio, and later the plants at Phoenixville, Pa., and Stevens Point, Wis. Mr. Dickinson has been associated with the foundry business for the past 35 years, having received his early training in the general foundry business in Chicago. He first became interested in the manufacture of reinforced brake shoes while working for the Union Iron & Steel Company of Chicago in 1905. Soon after Mr. Dickinson was employed by the American Brake Shoe & Foundry Company and here he was given opportunity to develop ideas on permanent iron molds for making brake shoes. After remaining with the American Brake Shoe & Foundry Company for two years he resigned to establish the Illinois Malleable Company, of Chicago, in the brake shoe business. In 1909 Mr. Dickinson resigned from this company to accept the superintendency of the Railway Material Company's plant at Toledo and later, while still in the employ of this company, started and operated its new plant at Phoenixville, and later at Stevens Point, retaining the latter position until his appointment as general manager of the Colorado Brake Shoe & Foundry Company. Mr. Dickinson is the inventor of numerous brake shoes and foundry devices pertaining to the manufacture of steel brake shoes.

F. T. Dickinson

The company has acquired a modern brake shoe foundry with a floor space of 150 ft. by 250 ft. and equipped with modern machinery. This foundry has a capacity of 50 tons a day, and its entire output is being devoted to reinforced brake shoes.

Trade Publications

TRACK MATERIAL.—The Illinois Steel Company, Chicago, has issued an attractive book of 48 pages of specifications, photographs and dimensions of track spikes, ordinary and open hearth oil-quenched track bolts and screw spikes. This book contains much data of use to those engaged in the ordering, handling and using of track materials.

TIE PLATES.—The Illinois Steel Company, Chicago, has issued an 80-page booklet showing the dimensions and designs of the standard sizes of tie plates rolled by that company. In addition to showing over 50 designs of tie plates, the book contains information concerning the widths of rail bases of various sections of rails and presents the information required with orders for tie plates.

MOTOR DRIVE.—A universal motor drive for any kind of double spindle shaper has recently been developed by the Oliver Machinery Company, Grand Rapids, Mich., and this company has now printed a bulletin fully describing and illustrating the device and showing its advantages. It also includes a drawing showing the floor plan of the motor drive operating in connection with the Oliver No. 483 high speed double spindle shaper.

THE UNIT CAR.—A steam propelled car, designed for railroad interurban and branch line service, known as the Unit car, is described in an attractive booklet containing 16 pages, issued by the manufacturer, the Unit Railway Car Company of Boston, Mass. As the name indicates, its power plant, passenger and baggage space is combined in one car and it has been operated successfully and demonstrated its adaptability for satisfactorily handling short line traffic. The text is illustrated with photographs of the car and drawings showing the side elevation, floor plan and front end.

TEXACO LUBRICANTS.—The series of advertisements of the Texas Company, New York, entitled "How Texas Jones Convinced the Railways," which has appeared in the *Railway Age*, has been reprinted in a booklet of 39 pages, 9 in. by 12 in., issued by the Texas Company. Thirty pages contain each a record in dialogue form, with illustrations, of imaginary meetings of a railroad purchasing board, showing the evidence brought by "Texas Jones" and others to convince the railways of the value of using Texaco lubricants. In addition, the book contains a new and valuable feature in the form of a list covering four pages, of railroad products made by the Texas Company.

WELDING RODS AND WIRE.—A small booklet of 60 pages has been published by the Page Steel & Wire Company, New York, which contains a large amount of useful information on welding and welding materials and describes the method of manufacturing Armco iron rods and wire for oxy-acetylene and electric welding, illustrated with microphotographs showing the structure of the material used. The booklet contains a large number of other illustrations and data in tabular form, including a table showing the diameter of rods to be used on various thicknesses of metals to be welded, temperature and metric conversion tables and data regarding the properties of elements and metal compositions, etc.

MECHANISM OF COMBUSTION.—The American Arch Company is issuing a series of bulletins dealing with the subject of combustion and the transfer of heat, of which the bulletin on The Mechanism of Combustion is the second. This bulletin, written by J. T. Anthony, vice-president of the company, presents in a very clear manner the various processes that take place in the combustion of coal. It explains the molecular construction of fuel and shows just what transformations occur in its combustion and why they occur. The illustrations serve as a great aid to the reader in visualizing the chemical processes of combustion. The pamphlet also shows where and how the heat is generated from fuel by the process of combustion. It discusses first the structure of atoms and molecules and explains the hydrocarbon molecules which are found in fuel. It explains the behavior of these atoms and molceules in the coal in both the quiescent and the active (when the coal is burning) state, and fully explains why and how the heat is obtained.

Railway Construction

BLACK MOUNTAIN RAILROAD.—The line building from Hulen, Ky., to the head of Packetts Creek, 8 miles has been completed. The tracklaying was carried out by company forces. M. E. S. Posey, chief engineer, Path Fork, Ky.

CANADIAN PACIFIC.—This company has asked the Dominion government for permission to build various branch lines in the western provinces of Canada, as follows: From Duchess, on the Bassano easterly branch in Alberta, in a general northerly direction; from Archive, on the Moose Jaw southwesterly branch, in a southwesterly and westerly direction to Wymark, on the Swift Current southeasterly branch in Saskatchewan; from a point on the Moose Jaw northwesterly branch at or near either Fortune or Rosetown, Saskatchewan, in a general southerly direction for 50 miles, then easterly for 30 miles in Saskatchewan; from a point on the Weyburn-Stirling branch in Saskatchewan in a southerly direction across two townships and thence in a westerly direction; from Lanigan, on the Pheasant Hills branch, in a northeasterly direction to a point between Carroll and Saskatchewan river and then to a point near Cumberland House, Saskatchewan; from Leader, on the Swift Current northwesterly branch, in a southwesterly direction 50 miles, and then easterly to a point on Big Stick lake in Saskatchewan; from a point on the Manitou lake branch to a point on the Whitford lake branch in Alberta.

GREAT NORTHERN.—This road will rebuild the bridge over the Whitefish river west of Whitefish, Mont., replacing the 341 ft. of timber trestle and 150 ft. Howe truss span with a new steel span. The material for this work is now on the ground. This road has also let a contract for the filling of the Beaver Bay trestle and the work will be completed this season.

ILLINOIS CENTRAL.—This road has received bids for the construction of a new passenger station, freight house and heating plant at Centralia, Ill. The passenger station will be 325 ft. by 36 ft., of which 85 ft. by 36 ft. will be two stories. The construction will be of reinforced concrete and brick with slate roofing. The freight house will be of concrete and brick construction with maple floors and a slate roof. The building will be 218 ft. by 40 ft., of which 110 by 40 ft. will be two stories. The heating plant will be 30 ft. by 34 ft., of brick and stone reinforced concrete construction with slab and composition roof. In conjunction with the new buildings considerable amount of new trackage, paving, sewerage, water lines and platforms will be constructed. The approximate cost of the entire construction will be $250,000.

The Illinois Central has awarded a contract to the Railway Water & Coal Handling Company, Chicago, for the construction of a concrete dam across the Tradewater river at Dawson Springs, Ky., to supply water for a pumping station. The dam will be of concrete construction, 14 ft. high by 125 ft. long and 10 ft. thick, and will cost approximately $6,000. Work has already been started on the project. This road has also awarded a contract to the same company for the construction of a pumping station 27 ft. by 27 ft. in area, one story in height, of brick with concrete foundation and slate roof. The machinery will consist of two 25 h.p. fuel-oil engines having belt connections with two 500 r.p.m. centrifugal pumps, discharging through 3,000 ft. of 10 in. cast iron main pipe into a 100,000 gallon tank. The approximate cost will be $35,000.

SOUTHERN RAILWAY.—This road has given a contract to M. M. Elkins, Macon, Ga., for building a bridge at Gaffney, S. C. The bridge and retaining wall approach will be of reinforced concrete construction. The structure will consist of three spans, one of which will be 35 ft. long and the other two 26 ft. long. The cost of the work will be about $30,000.

The Southern Railway is building, with its own forces, transfer sheds at the Atlanta (Ga.) transfer yard. The structures are to be one story high; one of the buildings will be 16 ft. wide and 760 ft. long, and another will be 30 ft. wide and 760 ft. long.

Railway Officers

Railroad Administration

Central

G. B. Clifton has resigned as office manager of the Railroad Administration to become secretary and treasurer of the United Artists' Corporation, with office at New York. Mr. Clifton was office manager of the Railroads' War Board in Washington in 1917, and prior to that was special representative of Vice-President **A. W. Thompson,** of the Baltimore & Ohio.

Federal and General Managers

The jurisdiction of **G. L. Peck,** federal manager of the Pennsylvania Railroad, Western Lines, and associated lines, has been extended over the Columbus Union Depot.

H. E. Whittenberger, general manager of the Grand Trunk, Western Lines, has been appointed federal manager of the same lines, with headquarters at Detroit, Mich., these lines having been released from the jurisdiction of **F. H. Alfred,** federal manager at Detroit, Mich.

E. F. Blomeyer, general manager of the Ann Arbor and the Manistique & Lake Superior, has been appointed federal manager of the Ann Arbor Railroad, with headquarters at Toledo, Ohio, which road has been released from the jurisdiction of **F. H. Alfred,** federal manager at Detroit, Mich.

B. C. Stevenson, general manager of the Toledo, St. Louis & Western, has been appointed federal manager of the same road and the Detroit & Toledo Shore Line, with headquarters at Toledo, Ohio. These roads have been released from the jurisdiction of **J. E. Taussig,** federal manager at St. Louis, Mo., and **F. H. Alfred,** federal manager at Detroit, Mich., respectively.

Operating

R. D. Miller, trainmaster on the Chicago, Milwaukee & St. Paul, with office at Ottumwa, Iowa, has been appointed trainmaster of the Milwaukee terminals, with headquarters at Milwaukee, Wis., vice **N. A. Meyer,** promoted.

Lieutenant-Colonel Dwight S. Brigham, of Newton Centre, Mass., who went to France in July, 1917, with the 14th Engineers (Railway), has returned and been discharged from the United States service. He has resumed his duties as trainmaster on the Boston & Albany, with headquarters at Beacon Park, Boston, Mass.

Lewis Randolph Taylor, whose appointment as superintendent of the Virginian Railway, with headquarters at Princeton, W. Va., has already been announced in these columns, was born on September 22, 1871, at Charlottesville, Va. He began railway work on September 1, 1888, with the Richmond & Danville, now a part of the Southern Railroad, as a rodman, and was employed on surveys and construction work on that road, the Chesapeake & Ohio, the Chicago & Eastern Illinois, and the Ohio Southern for the next five years. From May, 1895, to May, 1897, he served in the maintenance of way department of the Baltimore & Ohio, Philadelphia and Baltimore divisions, and then to September, 1901, was assistant engineer, United States Engineering department, in charge of field work, coast defense and harbor improvement, Baltimore harbor. From September, 1901, to June, 1903, he was in the general contracting business in Baltimore, and then was engaged in making the reconnoissance for the Deepwater and Tidewater railways, which later became the Virginian Railway, until February, 1904. He then served consecutively as division engineer, principal assistant engineer and superintendent of construction on the Tidewater Railway, and from April, 1909, to March, 1918, as superintendent of the Third and Deepwater divisions of the Virginian Railway. Since March, 1918, he has been engaged in mining enterprises.

Robert Cornelius Reid, whose appointment as superintendent of the New Orleans & Northeastern and the New Orleans Terminal, with headquarters at Hattiesburg, Miss., has already been announced in these columns, was born on November 22, 1872, at Huntsville, Texas. He was educated in private and high schools and began railway work in 1890, with the Central of Georgia. He subsequently served as city ticket agent at Columbus, Ga.; then as agent at Sylacauga, Ala., on the same road and in 1893 entered the service of the Plant System as a rate clerk. In 1894, he was appointed train despatcher on the Southern Railway, at Columbus, Miss.; later in the same year he was appointed bill clerk at Anniston, Ala., and in 1895 served as operator at Atlanta, Ga., on the same road. From 1896 to 1899, he was an operator on the Central of Georgia and the following year was appointed despatcher on the Alabama Great Southern, becoming chief despatcher in 1906. In 1908 he was appointed chief despatcher on the Cincinnati, New Orleans & Texas Pacific, and two years later was appointed trainmaster of the Alabama Great Southern. In 1917 he became trainmaster on the New Orleans & Northeastern, which position he held until his recent appointment as superintendent of that road and the New Orleans Terminal, as above noted.

Financial, Legal and Accounting

W. J. Stevenson has been appointed general solicitor of the New York, Chicago & St. Louis, with headquarters at Cleveland, Ohio, vice **H. T. Ballard,** resigned.

Traffic

R. W. Farrell has been appointed general baggage and mail agent of the Long Island Raliroad, with headquarters at Long Island City, vice **W. Van Valkenburgh,** deceased.

C. H. Ryan, Jr., division freight agent on the Louisville & Nashville, with headquarters at Nashville, Tenn., has been transferred to Memphis, succeeding **R. S. Willock,** division freight agent of the Memphis line. Mr. Willock succeeds Mr. Ryan at Nashville.

A. Hilton, whose promotion to traffic manager of the St. Louis-San Francisco, the Fort Worth & Rio Grande, the St. Louis-San Francisco & Texas, the Kansas City, Clinton & Springfield, the Paris & Great Northern Belt, the West Tulsa Belt and the Rock Island-Frisco Terminal, with headquarters at St. Louis, Mo., was announced in the *Railway Age* of April 18, was born at Hamilton, Ont. He entered railway service in 1878 as a clerk on the Great Western of Canada, now a part of the Grand Trunk. From 1880 to December, 1884, he was a clerk in the passenger department of the Chicago & Alton, and subsequently, until 1889, he was city passenger and ticket agent on the same road at Kansas City, Mo. In 1887 he acted as Pacific Coast agent at San Francisco, Cal., and from 1889 to March 1, 1901, was general agent in the passenger department of the same road at Kansas City. On March 1, 1901, he was appointed assistant general passenger agent of the Kansas City, Fort Scott & Memphis, and the following August he was made general passenger agent of the St. Louis-San Francisco. In October, 1913, he was appointed passenger traffic manager of the same road. In 1918 he was promoted to assistant traffic manager of the St. Louis-San Francisco and the Missouri, Kansas & Texas, which position he held until March 1, 1919, the date of the regrouping of the Southwestern region lines. Incident to the regrouping

A. Hilton

he was appointed assistant traffic manager of the St. Louis-San Francisco, the Kansas City, Clinton & Springfield, the Paris & Great Northern, the West Tulsa Belt and the Rock Island Frisco Terminal, which position he held prior to his recent promotion.

Engineering and Rolling Stock

I. O. Walker, division engineer of the Atlanta division of the Nashville, Chattanooga & St. Louis, with office at Atlanta, Ga., has retired after 33 years continuous service, 28 of which were spent with the Nashville, Chattanooga & St. Louis and leased Lines.

R. B. Robinson, engineer maintenance of way of the Oregon Short Line, with headquarters at Pocatello, Idaho, has been appointed engineer maintenance of way of the Union Pacific, with headquarters at Omaha, Neb., to succeed **W. R. Armstrong,** whose promotion to assistant chief engineer appears elsewhere in these columns.

H. L. Worman, master mechanic on the St. Louis-San Francisco, with office at Memphis, Tenn., has been appointed assistant superintendent of motive power, with headquarters at Springfield, Mo., and **G. R. Wilcox,** assistant master mechanic at Monett, Mo., has been appointed master mechanic of the Southern division, with headquarters at Memphis, vice Mr. Worman.

W. R. Armstrong, engineer maintenance of way of the Union Pacific and the St. Joseph & Grand Island, with headquarters at Omaha, Neb., has been promoted to assistant chief engineer of these roads, the Oregon Short Line and the Los Angeles & Salt Lake, with headquarters at Salt Lake City, Utah, to succeed Carl Stradley, deceased. Mr. Armstrong has had 25 years of railroad experience, both as an engineer in charge of construction and maintenance of way and as an operating official. Prior to his entering the employ of the Oregon Short Line in 1905, he was connected with various lines in the Middle West. During his first year with the Oregon Short Line he was employed on special engineering work, and in the following year was placed in charge of the construction of the Yellowstone Park branch and also in charge of the extension from Huntington, Ore., through the Snake river canyon, to Homestead. In 1908, Mr. Armstrong was made superintendent of the Montana division which position he held until 1913, when he was promoted to general manager and chief engineer of the Salt Lake & Utah, then under construction. On August 1, 1916, he was appointed engineer maintenance of way of the Union Pacific, which position he held until his recent promotion.

W. R. Armstrong

R. D. Moore, signal supervisor of the Los Angeles division of the Southern Pacific, Pacific System, with headquarters at San Francisco, Cal., has been promoted to assistant signal engineer, with the same headquarters, succeeding **L. V. Parle,** deceased. **C. A. Veale,** signal supervisor of the Tucson division, with headquarters at Tucson, Ariz., has been transferred to succeed Mr. Moore. **H. M. Stone,** principal assistant signal supervisor, with headquarters at Los Angeles, Cal., has been promoted to signal supervisor succeeding Mr. Veale. **P. A. Bliss,** who recently received his discharge from the United States Army, has been appointed signal supervisor of the Stockton division, with headquarters at Stockton, Cal.

H. H. Maxfield, formerly superintendent of motive power of the New Jersey division of the Pennsylvania Railroad, with headquarters at New York, who was granted a furlough to enter military service, as an officer in the 9th Engineers, National Army, in July, 1917, has returned to the service of the Pennsylvania as acting works manager, with office at Altoona, Pa., in charge of the Altoona shops, comprising the Altoona machine shops, the Altoona car shops, the Juniata shops and the South Altoona foundries. This is a new position recently created on the Pennsylvania Railroad, Eastern Lines. Mr. Maxwell reports to the general superintendent of the Eastern Pennsylvania division and the superintendent of motive power of that division has been relieved of the jurisdiction over the above named plants. While in France Mr. Maxfield was superintendent of motive power of the Transportation Corps, American Expeditionary Force.

Corporate

Railway Officers in Military Service

Major C. E. Lester of Meadville, Pa., has been appointed general superintendent of the 19th Grand Division, Transportation Corps, of the American Expeditionary Force. He entered the National Guard, 13th Pennsylvania Infantry, in August, 1916, and was commissioned first lieutenant, infantry, in October of the same year. In August, 1917, he was transferred to the engineers. He was appointed captain, engineers, in the National Army in April, 1918, and commanding officer of the 50th Engineers, with which he went abroad in July, 1918. Upon his arrival in France he was appointed general foreman at the Nevers locomotive shops, operated entirely by United States soldiers. He subsequently served as assistant superintendent of the same shops and then as acting general superintendent of the 19th Grand Division until his appointment as general superintendent of the same division. Major Lester was formerly general foreman boiler maker on the Erie at Meadville, Pa., from April, 1906, to January, 1911, and was assistant master mechanic on the Baltimore & Ohio at Pittsburgh, Pa., until March, 1912, when he returned to the Erie as foreman boiler maker at Jersey City. From July, 1912, to July, 1914, he was assistant foreman in the tank shop of the American Locomotive Company at Dunkirk, and then was inspector with the Lima Locomotive Works at Lima, O., and from February, 1915, to August, 1916, was boiler maker foreman on the Lehigh Valley at Sayre, Pa.

Obituary

W. P. Boger, general freight agent of the Florida East Coast Railroad, with headquarters at Jacksonville, Fla., died in the East Coast Hospital, at St. Augustine, Fla., on April 27.

William N. Noon, formerly superintendent of bridges and buildings of the Duluth South Shore & Atlantic, who retired in 1912, died on April 27, at his home in Miami, Fla. It is believed that Mr. Noon's death was due to a fall which he sustained while walking on a highway bridge soon after his retirement.

Frank May Souther, assistant treasurer of the National Railways of Mexico, with office at New York, died at his home in New York on April 26, after a short illness. Mr. Souther served on the Mexican Central Railway Cmopany, Limited, for about 20 years (part of this time, from 1907 to 1909, as treasurer), previous to the merger of that road and the National Railway Company of Mexico, to form the National Railways of Mexico, and since that time he was assistant treasurer of the new company.

Charles H. Jacobi, assistant engineer with the Division of Capital Expenditures, United States Railroad Administration, died of pneumonia in Salt Lake City, Utah, on April 20, while on an inspection trip en route to the Pacific coast. Mr. Jacobi was born in Brooklyn, N. Y., on March 14, 1883, and was employed for a number of years as assistant engineer with the Lehigh Valley, and more recently as construction engineer with the Westinghouse, Church, Kerr Company, New York. He entered the service of the Railroad Administration on July 22, 1918.